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**INVENTORY OF FEDERAL AND STATE  
HISTORICAL MAPS, CHARTS, AND VERTICAL AERIAL  
PHOTOGRAPHS  
APPLICABLE TO EROSION-RATE STUDIES  
ALONG THE ILLINOIS COAST OF LAKE MICHIGAN**

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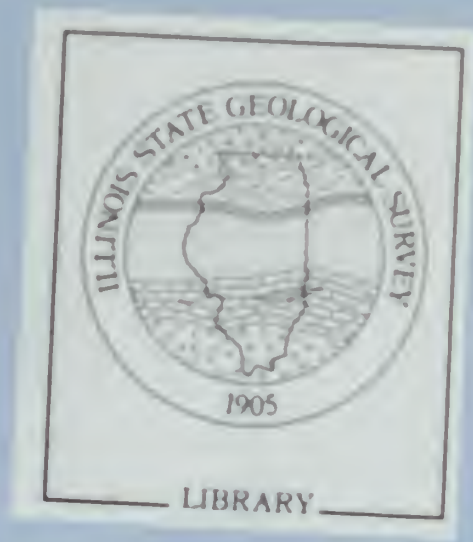
**Submitted to:**

**Federal Emergency Management Agency  
Office of Risk Assessment  
Federal Insurance Administration  
Washington, D.C.**

**Final Contract Report for:  
FEMA Assistance Award No. EMW-91-K-3575  
Report 2 of 2**

**Illinois State Geological Survey  
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**Accompanies Report 1 entitled:  
Illinois Pilot Erosion-Rate Study  
By: Michael J. Chrzastowski, Anne L. Erdmann,  
Christopher J. Stohr, and Paul D. Terpstra**

**Illinois State Geological Survey  
Open-File Series 1993-3**

**Michael J. Chrzastowski, Ph.D.  
Principal Investigator**

**January 1993**



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## INTRODUCTION

This report is an inventory of historical and recent survey sheets, maps, charts, and vertical aerial photographs produced for the Illinois coast of Lake Michigan by various federal and state agencies. This report (2 of 2) accompanies the report (Report 1) entitled "Illinois Pilot Erosion-Rate Data Study" (Chrzastowski *et al.*, 1993) prepared for the Federal Emergency Management Agency (FEMA) by the Illinois State Geological Survey (ISGS). Both reports are final products for FEMA Assistance Award No. EMW-91-K-3575.

The Illinois Pilot Erosion-Rate Data Study compares temporal changes in the position of historical shorelines and blufflines along selected segments of the Lake Michigan coast of Lake County, Illinois. The purpose of the pilot study was to document methods and time in compiling an erosion-rate database. Data sources for the Illinois pilot study were two sets of historical maps and two sets of vertical aerial photographs. These four data sets were only a few selected from the extensive list of data sources that could be applicable to such erosion-rate studies along the Illinois coast. The purpose of this report is to provide an inventory to assist in selecting data sources for future erosion-rate studies along the Illinois coast and to provide an example of the various data sources potentially available for a Great Lakes coast.

This is not a complete inventory. The primary focus is restricted to scales of 1:24,000 or greater. Smaller scale maps, charts, and vertical aerial photographs may have application to an erosion-rate study, but are not included here. In addition, the emphasis in this inventory is only on data sources prepared by federal and state agencies. Additional federal and state maps and aerial photographs may exist but were not identified in the process of compiling this inventory. Additional data sources



are known to be available from county offices and municipalities along the coast and from private-sector mapping agencies. However, as a general rule, the federal and state data sources are of greatest benefit for the purpose of documenting regional coastal change because mapping accuracy and format is consistent over a broad area of coverage. In addition, maps prepared by county offices, municipalities or the private sector may not be appropriate for mapping coastal change. Unless the mapping was specifically completed to document shorelines or blufflines, these features may have been derived from maps or aerial photographs collected by federal and/or state agencies. The year of the map thus may not represent an accurate date for the shoreline or bluffline position, and this could lead to errors in calculating rates and temporal trends of coastal change.

## **SOURCE AGENCIES FOR HISTORICAL MAPS AND CHARTS**

### **Federal Agencies**

#### ***U.S. Army***

The earliest topographic and hydrographic mapping along the Great Lakes coasts was done by the U.S. War Department through the Topographical Engineers and subsequently by the Corps of Topographical Engineers of the U.S. Army. These maps were prepared for site-specific areas where the U.S. Army was planning or building structures to stabilize river mouths and/or provide harbors of refuge. Earliest mapping along the Illinois coast was performed in the 1830s to assist in coastal engineering at the mouth of the Chicago River (U.S. Congress, 1839). Maps by the U.S. Army Corps of Topographical Engineers and Corps of Engineers were prepared in the mid- to late 1800s at federal harbor projects in Illinois at Waukegan Harbor, Chicago Harbor, and Calumet Harbor (Table 1). Through the 1900s the Corps of Engineers has conducted



hydrographic mapping at these federally maintained harbors. The maps of the harbor areas document coastal changes, but these are not a viable data source for map coverage extending more than a few miles to either side of the harbor projects.

### ***U.S. Lake Survey***

In response to the need for systematic and regional surveys of the Great Lakes coasts, the U.S. Lake Survey was established in 1841. This agency was within the U.S. Army and grew out of the Corps of Topographical Engineers. The specific mandate by the U.S. Congress was to conduct a "survey of the northern and northwestern lakes" to produce Great Lakes topographic and hydrographic maps and to publish Great Lakes nautical charts. The field sheets (i.e., smooth sheets) prepared by the U.S. Lake Survey are the primary data source for topographic and hydrographic mapping along the Illinois coast in the late 1800s and early 1900s (Table 1). These field sheets are the Great Lakes equivalent to the "T" sheets and "H" sheets prepared along the U.S. ocean coasts by the U.S. Coast and Geodetic Survey.

The history of the U.S. Lake Survey (USLS) spans 135 years (Woodford, 1991). In 1882, 41 years after its founding, the USLS completed its original mandate of producing nautical charts for the entire Great Lakes, and the USLS was disbanded. The USLS was re-established in 1901 as shipping increased on the Great Lakes, vessels became larger, and charts became increasingly outdated. The USLS operated until October 1970 when it was redesignated the U.S. Lake Center, removed from the U.S. Army Corps of Engineers, and placed within the National Ocean Survey (Service)(NOS) of the National Oceanic and Atmospheric Administration (NOAA). The U.S. Lake Center operated as a NOAA-NOS office until it was closed in March 1976. Since 1976 all functions of the former Lake Center have been incorporated into the NOAA-NOS offices in Rockville, Maryland.





Topographic and hydrographic mapping along the U.S. Great Lakes coasts for the purpose of producing nautical charts thus has had a three-phase history. Two phases of mapping by the U.S. Lake Survey were from 1841 to 1882 and from 1901 to 1970. Since 1970 the coastal mapping has been under the direction of NOAA.

Table 1. Years of survey sheets for federal harbor projects (partial listing) and years of U.S. Lake Survey topographic and hydrographic surveys for the Illinois coast.	
Agency	Years of Map Data Sets
U.S. Army (Survey sheets for harbor projects; partial listing)	1849 1865 1876 1892, 1895, 1899 1911 1953
U.S. Lake Survey (Field sheets; topographic and hydrographic surveys)	1872, 1873 1907, 1908, 1909 1909-1911, 1910-1911 1932, 1936, 1937 1943 1955, 1958 1964

***NOAA, National Ocean Service***

Subsequent to taking responsibility for surveying of the Illinois coast in 1970, NOAA-NOS has collected vertical aerial photography, but no new hydrographic surveys have been performed. NOAA-NOS is the source for obtaining copies of survey sheets completed by the U.S. Lake Survey. NOAA-NOS is also the primary source for information on all charts published by the U.S. Lake Survey and subsequently published by NOAA-NOS (Table 2).

***U.S. Geological Survey***

The U.S. Geological Survey (USGS) initiated topographic mapping along the Illinois





coast in the late 1800s with the first topographic maps published in 1901-02 at a scale of 1:62,500 (15-minute quadrangles). The first publication of 1:24,000-scale (7.5-minute) topographic maps occurred in 1928 (Table 2). A total of seven 7.5-

Table 2. Years of published topographic maps and nautical charts for the Illinois coast prepared by federal agencies.	
Agency	Years of Map Data Sets
U.S. Geological Survey (7.5-minute quadrangles)	1928 (Reprinted 1930, 1931, 1938, 1947) 1929 (Reprinted 1939) 1936 (Reprinted 1939) 1937 (Reprinted 1939) 1938 (Reprinted 1939) 1951 1953 (Reprinted 1955, 1956) 1960 (Reprinted 1962) 1963 (Reprinted 1964) 1960 (Photorevised 1972) 1960 (Photorevised 1972, 1980) 1963 (Photorevised 1972) 1963 (Photorevised 1972, 1980) 1963 (Photorevised 1972; Photoinspected 1978) 1965 1965 (Photorevised 1973) 1965 (Photorevised 1973; Photoinspected 1977)
U.S. Lake Survey (nautical chart edition years)	1876, 1877 1913, 1914, 1919 1924 1930, 1932, 1933, 1934, 1935, 1936, 1937, 1938, 1939 1941, 1942, 1944, 1945, 1947, 1948 1950, 1951, 1954, 1955, 1957, 1959 1960, 1963, 1966, 1969
NOAA/National Ocean Service (nautical chart edition years)	1972, 1975, 1977, 1978, 1979 1981, 1983, 1985, 1986, 1987, 1988 1990, 1991, 1992

minute quadrangles cover the Illinois shore. Although the USGS was the first to perform detailed mapping of topography and cultural features, for shoreline mapping



the USGS relied on previous surveying by the USLS. On the 1928 editions of the USGS topographic maps, it is noted that shorelines and triangulation were derived from the U.S. Lake Survey.

### **State Agencies**

The first topographic maps prepared by an Illinois state agency applicable to the creation of a historical erosion-rate database occur in a report by the State of Illinois Division of Waterways (1958). This report includes maps showing annual shoreline changes for 1952 through 1955, long-term shoreline changes comparing 1872, 1946, and 1955, and biennial (1946-54) and long-term (1872-1954) nearshore profiles. Hydrographic mapping along the Illinois coast was conducted in the 1970s by the Illinois State Geological Survey (ISGS). These maps (which include types of shore structures and properties boundaries) are compiled in an unpublished report (Illinois State Geological Survey, 1988) available from the ISGS Library.

### **Other Sources**

Many additional source agencies for historical maps are not included in this inventory. Such sources include historical maps on file in museums, historical societies, university libraries, and county and municipal engineering departments, planning departments, and highway departments. County and municipal government offices may have compiled bibliographies of historical maps and information on obtaining copies of these maps. Such a bibliography for Lake County, Illinois was prepared by McDougall



(1988). County and municipal government offices having special development and management responsibilities along the coast may have an abundant map inventory valuable to documenting coastal changes. An example is the coastal engineering section of the Chicago Park District which is responsible for the building and maintenance of the parks that dominate the Chicago lakeshore. The Chicago Park District maintains an extensive inventory of hydrographic surveys along the Chicago lakefront. A thorough compilation of map data relevant to creating an erosion-rate database should review county and municipal map sources since these may provide erosion-rate data temporally intermediate to that obtained from federal and state sources.

## **SOURCE AGENCIES FOR VERTICAL AERIAL PHOTOGRAPHS**

### **Federal Agencies**

The earliest vertical aerial photography included in this inventory was collected in 1939 (apparently for U.S. Department of Agriculture) and is archived by the National Archives and Records Administration. The most continuous set of vertical aerial photography by a single federal agency has been collected by the U.S. Geological Survey from 1946 through 1988 and was collected at nine intervals with spacing of 1 to 10 years (Table 3). Other federal agencies that have collected vertical aerial photographs along the Illinois coast include the Agricultural Stabilization and Conservation Service of the U.S. Department of Agriculture, National Aeronautics and Space Administration (NASA), NOAA-NOS, and the U.S. Air Force.





Table 3. Years for which federal agencies have collected vertical aerial photographs for the Illinois coast of Lake Michigan.	
Agency	Years of Aerial Photograph Data Sets
National Archives and Records Administration	1939
U.S Air Force	1968, 1969
U.S. Army Corps of Engineers	1971
U.S. Department of Agriculture Agricultural Stabilization and Conservation Service	1954 1961, 1967
U.S. Geological Survey	1952, 1953, 1958 1962, 1963 1973

### State Agencies

The most complete sets of vertical aerial photographs for the Illinois coast have been collected by the Aerial Surveys office of the Illinois Department of Transportation (IDOT) beginning in the mid-1950s, and by the Northeastern Illinois Planning Commission beginning in 1970. During the 35-year interval from 1956 through 1991, IDOT completed 22 photographic flights along the Illinois coast with a maximum temporal spacing of four years (Table 4). For the time period since 1956, the IDOT aerial photography is the most thorough documentation of Illinois coastal change.

Aerial photographs by the Northern Illinois Planning Commission span the 20-year interval from 1970 through 1990 with seven photographic flights never exceeding five years in temporal spacing. However, these photographs were recorded with a reconnaissance camera, which slightly limits their usefulness for detailed





measurements of coastal change.

Table 4. Years for which state agencies have collected vertical aerial photographs for the Illinois coast of Lake Michigan.	
Agency	Years of Aerial Photograph Data Sets
Illinois Department of Transportation (IDOT) Aerial Surveys	1970, 1974, 1976, 1977, 1978, 1979 1980, 1982, 1983, 1986, 1987, 1988 1991
Northeastern Illinois Planning Commission	1970, 1974, 1975 1980, 1985 1990

#### Private Firms

Private firms that have collected vertical (and oblique) aerial photography along the Illinois coast are an additional source for coastal change data. The firm with the longest continuous history of photographic documentation of the Illinois coast is the former Chicago Aerial Survey, now called GEONEX Aerial Photography, with headquarters in Des Plaines, Illinois. This company is named here not for the purpose of endorsement, but rather in recognition of the comprehensive photographic data set it has assembled. The years of vertical aerial photographs collected by Chicago Aerial Survey/GEONEX Aerial Photography are listed in Table 5. Also listed is vertical aerial photography collected by The Sidwell Company with headquarters in West Chicago, Illinois.



Table 5. Years of private sector collection of vertical aerial photographs for the Illinois coast of Lake Michigan.	
Firm	Years of Aerial Photograph Data Sets
Chicago Aerial Survey (Presently called GEONEX Aerial Photography)	1949 1955, 1956, 1957, 1958, 1959 1960, 1961, 1962, 1963, 1967 1970, 1975 1981, 1985 1990
The Sidwell Company	1961, 1964, 1965, 1969 1973, 1976 1980, 1987

### TECHNIQUES USED IN HISTORICAL TOPOGRAPHIC MAPPING

The techniques used in topographic and hydrographic mapping along the Great Lakes coasts by the U.S. Lake Survey are discussed by Woodford (1991), from which this summary is compiled. Details of the early survey requirements and standards are also discussed in a report by the U.S. Engineer Department (1873). This summary focuses solely on the techniques of the U.S. Lake Survey in the late 1800s and early 1900s since these field sheets are the primary source of earliest mapping of the Illinois coast.

Triangulation was the basis for all early topographic mapping along the Illinois coast. Theodolites, stadia rods, and plane table alidades were the standard mapping tools. The U.S. Lake Survey established baselines several miles in length along the beach or across cleared land. From the ends of the baselines angles were measured to two or more distant points to establish positions of the baseline endpoints. Triangles and quadrilaterals were created by measuring additional angles. At control baselines, astronomical fixes were made with sextants to establish latitude and longitude.



Between 1841 and about 1845, a triangulation net was established by these means along the west shore of Lake Michigan from Chicago north to Green Bay, Wisconsin.

USLS topographic field parties had a field season that lasted five months from May through September. Topographic mapping usually extended about three-quarters of a mile inland, but was locally extended farther inland to incorporate towns or areas of specific mapping interest. Triangulation stations were established about 10 to 25 miles apart. These were usually on hilltops, but towers were also constructed to elevate the theodolite above tree tops in wooded areas. Some towers were over 100 feet high. Wooden towers were initially used, but by the turn of the century metal towers were the standard.

Prior to 1875 the USLS referenced Great Lakes depths to local datums or the lake level at the time of the surveys. After the U.S. Coast and Geodetic Survey (USC&GS) established a benchmark at Albany, New York, the USLS tied to this benchmark and referenced lake levels relative to Mean Tide New York (MTNY). In 1902 the USLS cooperated with USC&GS in converting USLS triangulation stations to the U.S. Standard Datum, later renamed the North American Datum.

USLS survey procedures changed with improvements in field equipment. In 1928 the first echo sounder was used in hydrographic mapping; in 1929 the first vertical aerial photography was used in establishing horizontal control.

### **TECHNIQUES USED IN VERTICAL AERIAL PHOTOGRAPHY**

Vertical aerial photography along the Illinois coast has been done with both cartographic (also called metric) cameras and reconnaissance cameras. Metric cameras





are usually calibrated cameras and have fiducial marks to facilitate the making of maps and cartographic products. Reconnaissance cameras are not calibrated and generally have lesser quality lenses. Thus for any coastal-change mapping using vertical aerial photographs, it is important to know which type of camera was used for the photographs selected for analysis. When using published reports that have documented coastal changes with aerial photographs, it is important to note camera type (also called sensor type) since this is a limiting factor in the precision of the reported data. The inventory reported here identifies the sensor type for most of the photographs.

For vertical aerial photographs along the Illinois coast at scales of 1:24,000 or greater, film type has been black and white, black and white infrared, or color. Camera focal lengths have been 50, 152, 210, or 305 mm. Most of the photographs are at scales ranging from 1:20,000 to 1:24,000.

Depending on the mapping objectives, vertical aerial photographs along the Illinois coast have been collected along flightlines that are oriented either north-south (approximately coast-parallel) or east-west (approximately coast-perpendicular). For mapping coastal changes, coast-parallel flightlines are a preferred orientation since the coast is recorded along a single strip with standard 60% forward overlap. One of the advantages of the vertical aerial photographs collected by the Illinois Department of Transportation (IDOT) is that flightlines follow the Illinois coast. This photography was conducted specifically for the purpose of documenting coastal characteristics for the IDOT Division of Water Resources which is responsible for state regulatory functions along the Illinois coast.





## **OBTAINING HISTORICAL MAPS AND CHARTS**

Depending on the specific historical map or chart of interest, there may be multiple sources for these data, or there may be a sole source. For maps and charts published by federal agencies, the most recent products may be most easily obtained from the national, regional, or local offices designated for sale and distribution. For examining and gaining copies of older maps and charts, it may be more efficient to use the resources of a designated Depository Library for federal publications. Early maps of harbor project areas by the U.S. Army Corps of Topographical Engineers and Corps of Engineers are filed in the National Archives and copies can be ordered from the Archives. However, a more efficient procedure for initial examination of the map coverage and determining whether to gain copies would be through the historical records section of the District Offices of the U.S. Army Corps of Engineers. Examples of map data having a sole source are the U.S. Lake Survey field sheets which require purchase of copies through the Data Control Section of the National Ocean Service of NOAA. Information on the offices for obtaining historical maps and charts is summarized in Appendix A.

## **OBTAINING VERTICAL AERIAL PHOTOGRAPHS**

The primary source of vertical aerial photographs for the Illinois coast is the Aerial Surveys office of the Illinois Department of Transportation, located in Springfield, Illinois. Prints of aerial photographs are available at costs that include a setup fee and a charge for each square foot of photographic print. Information for contacting the IDOT Aerial Surveys office and other sources for aerial photographs are listed in Appendix B.



## ACCURACY ASSESSMENT OF MAPS, CHARTS AND VERTICAL AERIAL PHOTOGRAPHS

### Historical Maps and Charts

Topographic and bathymetric mapping by the U.S. Lake Survey is the primary data source for characteristics of the Illinois coast in the late 1800s and early 1900s. Although these maps provide valuable information on land use and land cover, the positioning of map information is a potential problem because of inherent map inaccuracies. Intersections of roads and railroads and other cultural features that might be used in registering these maps to a modern base map require a thorough check of position accuracy to determine the adequacy of use as control points. The procedure required in such a check of control points is discussed in the accompanying report titled "Illinois Pilot Erosion-Rate Data Study" (Chrzastowski et al., 1993). An example of a potential problem in using road intersections as control points is that these may not have been mapped accurately and/or the road positions could have changed with time as roads were straightened, realigned, or otherwise improved.

The earliest maps along the Illinois coast at a scale equal to or greater than 1:24,000 that can most readily be registered to base maps that satisfy U.S. National Map Accuracy Standards (Ellis, 1978) are the U.S. Geological Survey 7.5-minute topographic maps published in 1928.

A limiting factor in the use of these early U.S. Geological Survey 7.5-minute quadrangles for evaluating coastal change is that the shorelines were obtained from earlier mapping by the U.S. Lake Survey. Topography and cultural features may be more accurately mapped on the USGS quadrangles compared to the U.S. Lake Survey



field sheets, but the shoreline position is no more accurate than on the U.S. Lake Survey sheets. The year of the shoreline is likely derived from the most recent U.S. Lake Survey mapping of this coast which was conducted from 1907 through 1911 rather than the 1928 publication date of the quadrangles. In addition, the shorelines are indicative of conditions at the time of the survey and are not adjusted to a standard datum.

No accuracy checks were made of any nautical charts listed in this inventory. The first charts published by the U.S. Lake Survey in the 1870s are likely of lesser accuracy than those published in subsequent years. Charts produced after the establishment of the U.S. National Map Accuracy Standards in 1941 (Ellis, 1978) meet these standards which have accuracy requirements for charts that are more rigorous than those for maps because the charts are used for navigation purposes.

### **Vertical Aerial Photographs**

Vertical aerial photographs along the Illinois coast collected with cartographic (metric) cameras have inaccuracies inherent to photographs resulting from camera tilt, lens and film distortions, and relief displacement. These inaccuracies need to be identified and corrected for when using the aerial photographs for map production.

## **RECOMMENDATIONS FOR DATA SOURCES IN EROSION-RATE STUDIES ALONG THE ILLINOIS COAST**

If it is necessary or desirable for an erosion-rate study along the Illinois coast to build on data sources that cover the entire coast prior to the 1920s, then the sole references at a scale of 1:24,000 or greater are the field sheets by the U.S. Lake Survey. Prior to the 1920s, two USLS data sets exist for the Illinois coast, the first dated 1872 and



1873, and the second dated 1907 through 1911. Although these surveys provide documentation of earliest coastal characteristics, they have a major disadvantage as a data source. The Illinois Pilot Erosion-Rate Study determined that one of the major time investments in the generation of an erosion database was the effort needed to select and check control points on the USLS field sheets and to achieve acceptable base map registration. The decision to include these USLS data in an erosion database must be evaluated with recognition of the time required to gain accurate and reproducible registration of these maps. Considerable effort will be necessary to obtain the most accurate registration of these sheets to a USGS Digital Line Graph (DLG) base map that meets U.S. National Map Accuracy Standards.

The earliest topographic maps along the Illinois coast that could be most readily registered to modern base maps are the 1928 USGS 7.5-minute topographic maps. Although at this time much of the Illinois coast north of Chicago was still only in initial stages of land-use development, a sufficient number of cultural features are present to allow registration to a DLG base map. These USGS maps note that shorelines and triangulation were derived from the U.S. Lake Survey, and thus the shoreline is likely derived from the 1907 through 1911 surveys of the coast, which were the most recent surveys prior to publication of the USGS topographic maps. Advantages of these USGS maps are that the map accuracy of cultural features is greater than for the USLS sheets, and that these maps provide the first detailed mapping of topography and therefore bluffline position.

All vertical aerial photographs collected with metric cameras provide a reliable data source for conditions along the Illinois coast. However, photographic distortions and displacement prevent vertical aerial photographs from being used directly as maps for measuring coastal changes. These problems must be eliminated or minimized to







reduce measurement errors to an acceptable level. The most complete single data set of vertical aerial photographs for the Illinois coast begins in 1956 and is maintained by the Illinois Department of Transportation (IDOT). If earlier aerial photography is desirable, it is necessary to obtain copies from the National Archives, the U.S. Department of Agriculture Agricultural Stabilization and Conservation Service, or the U.S. Geological Survey.

Nautical charts are included in this inventory for the purpose of completeness, but these are not recommended as data sources for creating an erosion-rate database. Since the topographic and hydrographic data for the nautical charts are derived from the topographic and hydrographic surveys, the field sheets from these surveys are the primary data source that should be used in documenting coastal change. The field sheets are also prepared at a scale at least twice as large as that of the published chart.



## **OVERVIEW OF APPENDICES CONTENT AND FORMAT**

This report contains seven appendices that provide information relevant to selecting and obtaining maps, charts, and vertical aerial photographs for the Illinois coast. The sequence of appendices is as follows:

- Appendix A: Sources for Obtaining Historical Maps and Charts
- Appendix B: Sources for Obtaining Vertical Aerial Photographs
- Appendix C: Topographic and Hydrographic Survey Field Sheets
- Appendix D: Nautical Charts
- Appendix E: U.S. Geological Survey 7.5-Minute Quadrangles
- Appendix F: Vertical Aerial Photographs  
(Scale Greater Than or Equal to 1:24,000)

Each appendix is preceded with explanatory notes regarding the information presented. Vertical aerial photography at scales less than 1:24,000 may have applications to creating an erosion-rate database, but are not included in this inventory. However, they were compiled as a comprehensive listing at the Illinois State Geological Survey.

## **ACKNOWLEDGEMENTS**

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## APPENDIX A SOURCES FOR OBTAINING HISTORICAL MAPS AND CHARTS

### Appendix A Explanation

Multiple sources could be listed for obtaining historical maps and nautical charts. This listing of sources is composed according to the single original source that would be used by the Illinois State Geological Survey if compiling historical maps for an erosion-rate database along the Illinois coast. In a few cases, alternate sources are listed. This listing is in alphabetical order according to the agencies responsible for producing the maps or charts.

#### **National Oceanic and Atmospheric Administration (NOAA) National Ocean Service (NOS) (Nautical Charts)**

##### Primary Source

NOAA, National Ocean Service  
Distribution Branch (N/CG33)  
6501 Lafayette Avenue  
Riverdale, Maryland 20737

Phone: (301) 436-6990  
FAX: (301) 426-6829

Cost: \$5.50 per chart

##### Alternate Source

Map and Geography Library  
418 Library, MC-522  
University of Illinois at  
Urbana-Champaign  
Champaign, Illinois 61820

Phone: (217) 333-0827  
FAX: (217) 244-0398

Cost: Xerographic copies  
at reproduction cost

#### **U.S. Army Corps of Engineers (Field sheets)**

U.S. Army Corps of Engineers  
Chicago District  
Public Affairs Office  
111 North Canal Street  
Chicago, Illinois 60606

Phone: (312) 353-6423  
FAX: (312) 353-1271

Cost: Xerographic copies at reproduction cost





## Appendix A (continued)

### U.S. Geological Survey

(Out of Print 7.5-minute Quadrangles)

#### Primary Source

Earth Science Information Center  
U.S. Geological Survey  
507 National Center  
Reston, Virginia 22092

Phone: (703) 860-6045  
FAX: (703) 648-5548

Cost: \$12.00 per  
reproduction

#### Alternate Source

Map and Geography Library  
418 Library, MC-522  
University of Illinois at  
Urbana-Champaign  
Champaign, Illinois 61820

Phone: (217) 333-0827  
FAX: (217) 244-0398

Cost: Xerographic copies  
at reproduction cost

### U.S. Geological Survey

(Current 7.5-minute Quadrangles)

U.S. Geological Survey Map Sales  
Denver Federal Center  
Box 25286  
Denver, Colorado 80225

Phone: (303) 236-7477  
FAX: (303) 236-1972

Cost: \$2.50 per quadrangle

### U.S. Lake Survey

(Nautical Charts)

Map and Geography Library  
418 Library, MC-522  
University of Illinois at Urbana-Champaign  
Champaign, Illinois 61820

Phone: (217) 333-0827  
FAX: (217) 244-0398

Cost: Xerographic copies at reproduction cost



## **Appendix A (continued)**

### **U.S. Lake Survey**

(Field sheets; *i.e.*, smooth sheets)

U.S. Department of Commerce  
National Oceanic and Atmospheric Administration (NOAA)  
National Ocean Service (NOS)  
Hydrographic Surveys Branch, N/CG243  
Data Control Section  
6001 Executive Blvd.  
Rockville, Maryland 20852

Phone: (301) 443-8408  
FAX: (301) 443-8459

Cost: As of October 1992, \$48.00 per bromide copy.  
Note: Five to six weeks for order delivery. These sheets designated "I" sheets by the NOS Data Control Section.

### **War Department, U.S. Army Topographical Engineers**

(Field sheets)

National Archives  
Cartographic Branch  
8th and Pennsylvania Avenue, N.W.  
Washington, D.C. 20408

Phone: (703) 756-6700  
FAX: Not Available

Cost: Photographic copies at \$1.80 per foot length  
\$4.75 per 4x5 film negative  
\$10.50 per 8x10 film negative



## **APPENDIX B**

### **SOURCES FOR OBTAINING VERTICAL AERIAL PHOTOGRAPHS**

#### **Appendix B Explanation**

Sources listed here are federal and state offices and private firms that have photographic data for the Illinois coast. Costs are as of October 1992 and are for nonprofit entities such as government offices, universities and other nonprofit groups. Price quotes need to be obtained for commercial rates. Sources are listed in alphabetical order.

#### **Illinois Department of Transportation (IDOT)**

Illinois Department of Transportation  
Division of Highways, Aerial Surveys  
2300 South Dirksen Parkway  
Springfield, Illinois 62764

Phone: (217) 782-7627

FAX: (217) 782-1927

Cost: \$7.20 per 9x9 contact sheet  
(Provided free to other state agencies)

Note: The Illinois Department of Transportation also provides prints of 1988 vertical aerial photography of all of Illinois collected by MARKHURD Aerial Surveys of Minneapolis, Minnesota simulations with NAPP photography.

#### **National Aeronautics and Space Administration (NASA)**

See U.S. Geological Survey





## **Appendix B (continued)**

### **NOAA, National Ocean Service**

NOAA, National Ocean Service  
Support Section, N/CG 236 Nautical Charting Division  
6001 Executive Boulevard  
Rockville, Maryland 20852

Phone: (301) 443-8601  
FAX: (301) 443-1009

Cost: \$8.00 per black and white 9x9 photo  
\$16.00 per color 9x9 photo

### **Northeastern Illinois Planning Commission**

Northeastern Illinois Planning Commission  
400 West Madison Street  
Chicago, Illinois 60606

Phone: (312) 454-0400  
FAX: (312) 454-0411

Cost: \$9.00 per 9x9 photo (1985 and 1990 photos only)  
\$18.00 per 9x9 photo (photos taken prior to 1985)

### **U.S. Air Force**

See U.S. Geological Survey

### **U.S. Department of Agriculture Agricultural Stabilization and Conservation Service**

U.S. Department of Agriculture  
Agricultural Stabilization and Conservation Service  
Aerial Photo Field Office  
P.O. Box 30010  
Salt Lake City, Utah 84130

Phone: (801) 524-5856  
FAX: Not Available  
Cost: \$6.00 per 10x10 black and white print



## **Appendix B (continued)**

### **U.S. Geological Survey**

United States Geological Survey  
EROS Data Center  
Sioux Falls, South Dakota 57198

Phone: (605) 594-6151

FAX: (605) 594-6589

Cost: \$6.00 per black and white 9x9 photo  
\$16.00 per color 9x9 photo

Note: EROS Data Center also provides copies of photos by  
NASA and U.S. Air Force

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### **PRIVATE SECTOR (Illinois-based Aerial Photography/Mapping Firm)**

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#### **GEONEX Aerial Photography (formerly Chicago Aerial Survey)**

GEONEX Aerial Photography  
2140 Wolf Road  
Des Plaines, Illinois 60018

Phone: (708) 298-1480

FAX: (708) 827-1585

Cost: \$30.00 for first photo  
\$ 5.00 each additional photo

#### **The Sidwell Company**

The Sidwell Company  
28 West 240 North Avenue  
P.O. Box 920  
West Chicago, Illinois 60186

Phone: (708) 231-0206

FAX: (708) 231-8206

Cost: \$60.00 for first photo  
\$6.00 each additional photo



## APPENDIX C

### TOPOGRAPHIC AND HYDROGRAPHIC SURVEY FIELD SHEETS

#### Appendix C Explanations

- 1) Map numbers for U.S. Lake Survey field sheets (*i.e.*, "smooth sheets") are here prefixed with the letter "I" to be consistent with present indexing by the National Ocean Service Hydrographic Data Section. The original U.S. Lake Survey field sheets for the Illinois coast have a map number beginning with the number "1".
- 2) Map dates are the dates noted on the field sheet.
- 3) Titles of maps are those designated on the field sheets.
- 4) Map scales are the nominal scales designated on the field sheets.
- 5) Map descriptions are lacking for field sheets not available for review at the Illinois State Geological Survey or the Map and Geography Library at the University of Illinois at Urbana-Champaign.



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## Appendix C (continued)

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### 1849 - 1865 Mapping

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**Agency:** U.S. Corps of Engineers

**Reference:** RG77 US374 Sheet 80 (National Archives Reference)  
**Title:** Chart of Chicago Harbor  
**Date:** 1849  
**Scale:** 1:1,200  
**Description:** Map coverage from Lake Street to approximately 2,350 feet north of Water Street; shorelines for the years 1831, 1845 and 1849 are recorded; soundings are recorded between the jetties of Chicago Harbor, around the harbor entrance, and north of the harbor's north jetty; soundings to 1,200 feet offshore referenced to lake level at time of survey.

**Title:** Map of Chicago Harbor  
**Date:** 1865  
**Scale:** 1:300  
**Description:** Map coverage from Whitney Street to Illinois Central Railroad Company Breakwater, south of the Chicago River; roads and dated accretion levels to approximately 1500 feet landward of shoreline; surveying done in July, August and September 1865.

**Reference:** Map file Chi H, Case A Di  
**Title:** The Main Part of the Harbor of Chicago, ILL  
**Date:** 1865  
**Scale:** 1:300  
**Description:** Map coverage from Division Street to south of the Chicago River; roads mapped to approximately 6,000 feet landward of shoreline; soundings to approximately 2,400 feet offshore referenced to 2 feet above low water of 1847; surveyed in July, August and September of 1865.

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### 1872-1876 Mapping

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**Agency:** U.S. Corps of Engineers

**Title:** Map of Chicago Harbor, Illinois Showing the Shore-line Southward to Brook Street  
**Date:** April 1876  
**Scale:** 1:500  
**Description:** Map coverage from Division Street to 12th Street; roads and railroads mapped to approximately 2,000 feet landward of shoreline; 6-foot depth contours to approximately 2,500 feet offshore.





## Appendix C (continued)

**Agency:        U.S. Lake Survey**

Map No.: I-518  
Title: South West Shore of Lake Michigan  
Date: 1872  
Scale: 1:20,000  
Description: Map coverage from south of Calumet Harbor, IL to Gary, IN; several landmarks mapped to approximately 2,500 feet landward of shoreline; shoreline as surveyed in July 1872; soundings from the shoreline to approximately 3,300 feet offshore; in the Indiana Shoals region soundings are recorded to 17,500 feet offshore referenced to lake level at time of survey; no geographic grid; magnetic meridian and one true meridian shown.

Map No.: I-519  
Title: South West Shore of Lake Michigan  
Date: 1872  
Scale: 1:20,000  
Description: Map coverage of Calumet area; some roads and railroads mapped to approximately 3,500 feet landward of shoreline; 10-foot topographic contour interval; soundings from the shoreline to approximately 5,000 feet offshore referenced to lake level at time of survey; no geographic grid; magnetic meridian and one true meridian shown.

Map No.: I-520  
Title: South West Shore of Lake Michigan  
Date: 1872  
Scale: 1:20,000  
Description: Map coverage from Devon Avenue to 58th Street; roads and railroads mapped to approximately 6,000 feet landward of shoreline; 10-foot topographic contour interval; shoreline as surveyed in the months of September and October 1872; soundings to approximately 5,000 feet offshore referenced to lake level at time of the survey; no geographic grid; magnetic meridian and one true meridian shown.



## Appendix C (continued)

- Map No.: I-521  
Title: West Shore of Lake Michigan from Azimuth Station II North of Kenosha to Azimuth Station IV South of Kenosha  
Date: 1872  
Scale: 1:20,000  
Description: Map coverage from north of Kenosha, WI to southern part of Illinois Beach State Park; roads, railroads, and land use mapped to approximately 6,000 feet landward at shoreline; no topographic contours; soundings to approximately 5,000 feet offshore referenced to lake level at time of the survey; notation added in 1947 stating lake level at time of survey was 580.9 feet above Mean Tide New York (MTNY 1935); no geographic grid; magnetic meridian and one true meridian shown.
- Map No.: I-551  
Title: West Shore of Lake Michigan from Azimuth Station VII South to Azimuth Station IX  
Date: 1873 (surveyed in 1872)  
Scale: 1:10,000  
Description: Map coverage from Wilmette to Rodgers Park in Chicago; roads, railroads, and land use information mapped to approximately 6,000 feet landward of shoreline; soundings from the shoreline to approximately 6,000 feet offshore from Wilmette Harbor vicinity to Devon Avenue; soundings extend to 10,000 feet offshore in the vicinity of Grosse Point Lighthouse in Evanston; no geographic grid; magnetic meridian and one true meridian shown.
- Map No.: I-552  
Title: West Shore of Lake Michigan from Shore Station 81 (South of Azimuth Station VI) to Azimuth Station VIII South  
Date: 1873 (surveyed in 1872)  
Scale: 1:20,000  
Description: Map coverage from Fort Sheridan to Wilmette; roads, railroads and land use mapped to approximately 6,000 feet landward of shoreline; unlabeled topographic contours (assumed to be 20-foot contour interval); soundings to approximately 5,000 feet offshore referenced to lake level at time of survey; notation added in 1947 stating lake level at time of survey was 580.9 feet above Mean Tide New York (MTNY 1935); no geographic grid; magnetic meridian and one true meridian shown.



## Appendix C (continued)

Map No.: I-553  
Title: West Shore of Lake Michigan from Azimuth Station IV South to Azimuth Station VI South  
Date: 1873 (surveyed in 1872)  
Scale: 1:20,000  
Description: Map coverage from Waukegan to Fort Sheridan; roads, railroads and land use mapped to approximately 6,000 feet landward of shoreline; unlabeled topographic contours (assumed 20-foot contour interval); soundings to approximately 3,000 feet offshore referenced to lake level at time of the survey notation added in 1947 stating lake level at time of survey was 580.9 feet above Mean Tide New York (MTNY 1935); no geographic grid; magnetic meridian and one true meridian shown.

Map No.: I-556  
Title: West Shore of Lake Michigan  
Date: 1873  
Scale: 1:60,000  
Description: Regional mapping with coverage from north of Waukegan, IL to Gary, IN including the Lake Calumet area.

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### 1892 - 1899 Mapping

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**Agency:** U.S. Corps of Engineers

Title: Map of Chicago Harbor, ILL  
Date: 1892  
Scale: 1:500  
Description: Map coverage from Banks Street to 12th Street; roads and railroads to approximately 3,000 feet landward of shoreline; map shows conditions of the U.S. Government Piers, progress of construction of these piers, and changes in the shoreline from the time of the initial work to the date of the map; no soundings.

Reference: Map file Chi H, Case No. Q D1, Sheet No. A50  
Title: Chicago Harbor  
Date: 1892  
Scale: 1:1,000  
Description: Map coverage from Division Street to 16th Street; roads to approximately 3,000 feet landward of shoreline; some features referenced to "Plane of Reference of the Coast Charts of Lake Michigan, 3.00 feet below High Water of 1838" (1.8 feet above Chicago City Datum); soundings to approximately 5,500 feet offshore referenced to Chicago City Datum.





## Appendix C (continued)

Reference: Map File Chi H, Case No. Q D2 ,Sheet No. A69  
Title: Chicago Harbor, Illinois  
Date: 1895  
Scale: 1:1000  
Description: Map coverage from north of Elm Street to south of 14th Street; roads and railroads mapped to approximately 4,000 feet landward of shoreline; no soundings.

Reference: 56th Congress, 1st Session, House Document No. 343  
Title: Map of Waukegan Harbor, Illinois Showing Proposed Method for Obtaining a Channel 20 Feet Deep  
Date: October, 1899  
Scale: 1:3,600  
Description: Hydrographic contour map from the shoreline to 4,200 feet offshore from 2,400 feet north of Waukegan Harbor to 600 feet south of the Waukegan River; soundings to 29-foot depth referenced to 3.06 feet below High Water of 1838.

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### 1907-1911 Mapping

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**Agency:** **U.S. Corps of Engineers**

Reference: 63rd Congress, 1st Session, House Document No. 237; Sheet 8  
Title: Chicago Waterways--Chicago Harbor, Illinois  
Date: 1911  
Scale: 1:7,200  
Description: Map coverage from Elm Street to 12th Street; soundings from the shoreline to approximately 5,400 feet offshore referenced to Chicago City Datum; 3-foot contour interval.



## Appendix C (continued)

**Agency:** U.S. Lake Survey

**Map No.:** I-1155  
**Title:** Lake Michigan Near Evanston, Illinois  
**Date:** 1907  
**Scale:** 1:5,000  
**Description:** Map coverage from Wilmette to Evanston.

**Map No.:** I-1168 Part 1 of 3  
**Title:** South End of Lake Michigan--Vicinity of Indiana Harbor, Indiana  
**Date:** 1908  
**Scale:** 1:20,000  
**Description:** Map coverage from Calumet River, IL to Gary, IN; several landmarks mapped to approximately 800 feet landward of shoreline; topographic elevation points given; geographic grid referenced to U.S. Standard Datum of 1901; soundings beginning approximately 4,000 feet offshore referenced to Low Water Datum.

**Map No.:** I-1169  
**Title:** South End of Lake Michigan--Vicinity of South Chicago, Illinois  
**Date:** 1908  
**Scale:** 1:20,000  
**Description:** Map coverage from the Calumet Harbor to the South Branch of the Chicago River; several landmarks mapped to approximately 1,500 feet landward of shoreline; topographic elevation points given; geographic grid referenced to U.S. Standard Datum of 1901; soundings beginning approximately 3,300 feet offshore referenced to Low Water Datum.

**Map No.:** I-1172  
**Title:** South End of Lake Michigan, Vicinity of South Chicago  
**Date:** 1908  
**Scale:** 1:10,000  
**Description:** Map coverage from 59th Street Harbor to Calumet Harbor including northern end of Lake Calumet.

**Map No.:** I-1173  
**Title:** South End of Lake Michigan, Vicinity of South Chicago  
**Date:** 1908  
**Scale:** 1:10,000  
**Description:** Map coverage from Chicago Harbor to 59th Street Harbor.



### Appendix C (continued)

- Map No.: I-1176  
Title: South End of Lake Michigan--Vicinity of Chicago, Illinois  
Date: 1909  
Scale: 1:20,000  
Description: Map coverage of Chicago lakefront from Catalpa Street to Chicago Harbor; roads and some buildings mapped to approximately 2,500 feet landward of shoreline; geographic grid referenced to U.S. Standard Datum of 1901; soundings beginning approximately 2,500 feet offshore referenced to Low Water Datum.
- Map No.: I-1177 Sheet 1 of 2  
Title: South End of Lake Michigan--Vicinity of Evanston, Illinois  
Date: 1909  
Scale: 1:20,000  
Description: Map coverage from Winnetka to Bryn Mawr Avenue, Chicago; roads and railroads mapped to approximately 3,000 feet landward of shoreline; no land use information; 10-foot topographic contour interval referenced to elevation above mean lake level; geographic grid referenced to U.S. Standard Datum of 1901; soundings beginning approximately 3,000 feet offshore extending to approximately 40,000 feet lakeward of shoreline referenced to Low Water Datum.
- Map No.: I-1177 Sheet 2 of 2  
Title: Sketch of Hydrography North of Grosse Pointe Evanston, Illinois  
Date: 1909  
Scale: 1:20,000  
Description: Map coverage from Spruce Street in Winnetka to Bryn Mawr Avenue in Chicago; no land use information; only a few landmarks mapped to approximately 300 feet landward to shoreline; topographic elevation points given; geographic grid referenced to U.S. Standard Datum of 1901; soundings referenced to Low Water Datum.
- Map No.: I-1195  
Title: West Shore of Lake Michigan, South of Waukegan, Illinois--Sheet No. 1  
Date: 1910-11  
Scale: 1:20,000  
Description: Map coverage from Lake Forest to Winnetka; roads, railroads, and land use mapped to approximately 4,000 feet landward of shoreline; 10-foot topographic contour interval referenced to lake level; soundings beginning approximately 2,000 feet offshore and extend to approximately 35,000 feet offshore; soundings referenced to Low Water Datum; 1873 soundings shown along nearshore; geographic grid referenced to U.S. Standard Datum.



### Appendix C (continued)

Map No.: I-1196  
Title: West Shore of Lake Michigan, South of Waukegan, Illinois--Sheet No. 2  
Date: 1910-11  
Scale: 1:20,000  
Description: Map coverage from south of Zion to Lake Forest; roads, railroads and land use mapped to approximately 5,000 feet landward of the shoreline; 10-foot topographic contour interval referenced to lake level; soundings begin approximately 2,000 feet offshore and extend to approximately 30,000 feet offshore; soundings referenced to Low Water Datum; 1873 soundings shown along nearshore; geographic grid referenced to U.S. Standard Datum.

Map No.: I-1197  
Title: West Shore of Lake Michigan, South of Kenosha, WI  
Date: 1909-11  
Scale: 1:20,000  
Description: Map coverage from north of Kenosha, WI to south of Zion, IL; roads, railroads, and land use mapped to approximately 5,000 feet landward of shoreline; 10-foot topographic contour interval referenced to lake level; soundings begin approximately 3,000 feet offshore and extend to approximately 20,000 feet offshore; soundings referenced to Low Water Datum; 1872 soundings shown along nearshore; geographic grid referenced to U.S. Standard Datum.

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### 1932-1937 Mapping

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**Agency:** U.S. Lake Survey

Map No.: I-1611  
Title: South End of Lake Michigan, Vicinity of Chicago Harbor  
Date: 1932  
Scale: 1:10,000  
Description: Map coverage from Chicago Harbor south to Jackson Park; including sections of the South Branch Chicago River.

Map No.: I-1612  
Title: South End Lake Michigan, Vicinity of Chicago Harbor  
Date: 1932  
Scale: 1:10,000  
Description: Map coverage from Montrose Harbor to Chicago Harbor.





### Appendix C (continued)

Map No.: I-1613  
Title: South End of Lake Michigan, Vicinity of Indiana Harbor, IN  
Date: 1932  
Scale: 1:10,000  
Description: Map coverage from north of Calumet Harbor, IL to Gary, IN including Little Wolf Lake.

Map No.: I-1705  
Title: South End of Lake Michigan, Vicinity of Calumet Harbor  
Date: 1936  
Scale: 1:20,000

Map No.: I-1706  
Title: Chicago Harbor  
Date: 1936  
Scale: 1:15,000  
Description: Map coverage from Chicago Harbor to Montrose Harbor.

Map No.: I-1707  
Title: South End of Lake Michigan, Vicinity of Chicago Harbor  
Date: 1936  
Scale: 1:20,000

Map No.: I-1732  
Title: Lake Michigan Revisory Surveys of Harbors (Kenosha, Sheboygan, Kewanee, and Port Washington)  
Date: 1937  
Scale: 1:10,000  
Description: Map coverage of Waukegan Harbor vicinity.

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### 1943-1946 Mapping

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**Agency:** U.S. Lake Survey

Map No.: I-1822  
Title: Lake Michigan  
Date: 1943  
Scale: 1:10,000  
Description: Inset 1) Waukegan, Illinois



## Appendix C (continued)

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### 1953-1958 Mapping

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**Agency:** U.S. Army Corps of Engineers

**Reference:** 83rd Congress, 1953 1st Session, House Document No. 28, 137 p., 5 appendices.

**Title:** Illinois Shore, Lake Michigan--Changes in Shoreline and Offshore Depths

**Description:** Map appendices include hydrographic contour maps at 1:24,000 scale of the entire Illinois shore of Lake Michigan; contours drawn at 1, 2 and 3 fathom depths from the mapping in 1872-73 and 1909-11 by the U.S. Lake Survey; the 1 to 3 fathom depths for 1946 are marked along lines at each range station; shorelines are drawn for the years 1872-73, 1909-11, 1937-38 and 1946-47; depths and shorelines are all referenced to Low Water Datum. Profile comparisons cover 22 of the 50 range stations surveyed in 1946 with the 1872-73 and 1909-11 profiles superimposed; profiles extend 5,500 feet offshore.

**Agency:** State of Illinois, Division of Waterways,  
Department of Public Works and Buildings

**Reference:** State of Illinois Division of Waterways, 1958  
(see References Cited for complete citation)

**Title:** Interim Report for Erosion Control,  
Illinois Shore of Lake Michigan

**Description:** Report appendices include maps of shoreline changes and profile comparisons for the Illinois lakeshore from the Illinois-Wisconsin state line to the Chicago south side lakeshore at Burnham Park Harbor.

Exhibit 2: Comparison of annual shorelines 1952 through 1955 from U.S. Naval Training Station Great Lakes to Lake Forest (approximate scale 1:7,800) and 1955 short-term shoreline changes at northern Illinois Beach State Park (approximate scale 1:4,200).

Exhibit 3: Comparison of annual shoreline changes 1952 through 1955 from Illinois-Wisconsin state line to southern Illinois Beach State Park (approximate scale 1:7,800)

Exhibits 4-7: Comparison of 1872, 1946 and 1955 shorelines Illinois-Wisconsin state line to Chicago's Burnham Park (approximate scale 1:23,600).

Exhibits 8-10: Biennial profile changes (1946, 1950, 1952, 1954) for odd ranges 1 through 13, 21 and 25, and even ranges 12, 16, 28, 32.

Exhibits 11-13: Long-term profile changes (1872, 1909-11, 1946, 1954) for ranges 1, 5, 7, 9, 11, 12, 13, 16.



## Appendix C (continued)

**Agency:** U.S. Lake Survey

**Map No.:** I-1963

**Title:** Lake Michigan, Chicago Waterfront--  
Grosse Point Light to Belmont Harbor

**Date:** 1955

**Scale:** 1:15,000

**Description:** Map coverage from Grosse Point Light south to Belmont Harbor; several landmarks mapped to approximately 1,000 feet landward of shoreline; geographic grid referenced to North American Datum of 1927; shoreline and culture compiled from aerial photography of 1952 and field corrections in 1955; soundings to approximately 22,500 feet offshore referenced to Low Water Datum; contours at 1, 2, 3, 3.5, 4, and 5 fathom intervals.

**Map No.:** I-1964

**Title:** Lake Michigan , Chicago Waterfront,  
Belmont Harbor to 31st Street Beach

**Date:** 1955

**Scale:** 1:15,000

**Map No.:** I-1965

**Title:** Lake Michigan, Chicago Waterfront,  
31st Street Beach to 79th Street Filtration Plant

**Date:** 1955

**Scale:** 1:15,000

**Map No.:** I-2017

**Title:** U.S. Naval Training Center, Great Lakes, Illinois

**Date:** July 1958

**Scale:** 1:5,000



## Appendix C (continued)

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### 1964 Mapping

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**Agency:** U.S. Lake Survey

**Map No.:** I-2230

**Title:** Lake Michigan--Wilmette to Belmont Harbor

**Date:** 1964

**Scale:** 1:15,000

**Description:** Map coverage from Wilmette to Belmont Harbor; roads and railroads mapped to approximately 4,000 feet landward of shoreline; geographic grid referenced to North American Datum of 1927; topography compiled from aerial photography of April 1962; soundings from the shoreline to approximately 19,000 feet offshore; referenced to Low Water Datum.

**Map No.:** I-2231

**Title:** Lake Michigan--Belmont Harbor to 1 Mile South of Burnham Park Harbor

**Date:** 1964

**Scale:** 1:15,000

**Description:** Map coverage from Belmont Harbor to 31st Street; roads, railroads, buildings mapped to approximately 4,000 landward of shoreline; geographic grid referenced to North American Datum of 1927; topography compiled from aerial photography of April 1962; soundings from the shoreline to approximately 19,000 feet offshore referenced to Low Water Datum.

**Map No.:** I-2232

**Title:** Lake Michigan--1 Mile South of Burnham Park Harbor to 1/2 Mile North of Calumet Harbor

**Date:** 1964

**Scale:** 1:15,000

**Description:** Map coverage from 31st Street to 80th Street; roads and railroads mapped to approximately 4,000 feet landward of the shoreline; geographic grid referenced to North American Datum of 1927; topography compiled from aerial photography of April 1962; soundings to approximately 16,000 feet offshore referenced to Low Water Datum.





## Appendix C (continued)

Map No.: I-2233  
Title: Lake Michigan--1/2 Mile North of Calumet Harbor to Indiana Harbor  
Date: 1964  
Scale: 1:15,000  
Description: Map coverage from 80th Street to 129th Street; roads and railroads mapped to approximately 5,000 feet landward of shoreline; geographic grid referenced to North American Datum of 1927; limited topography compiled from aerial photography of September 1959, November 1961, and April 1962; soundings to approximately 1,500 feet offshore referenced to Low Water Datum.

Map No.: I-2235  
Title: Lake Michigan--Montrose, Burnham Park, and Jackson Park  
Date: 1964  
Scale: 1:5,000  
Description: Insert 1) Jackson Park Harbor  
Insert 2) Burnham Park Harbor  
Insert 3) Montrose Harbor  
Map coverage of each of the three Chicago small-boat harbors; roads and railroads mapped to approximately 3,000 feet landward of shoreline; geographic grid referenced to the North American Datum of 1927; topography compiled from aerial photography of April 1962; soundings in each harbor and the harbor approach area referenced to Low Water Datum.

Map No.: I-2236  
Title: Lake Michigan--Insets--Belmont Harbor and Diversey Harbor  
Date: 1964  
Scale: 1:5,000  
Description: Map coverage along Chicago lakefront from Wisconsin Street to Brompton Avenue; roads mapped to approximately 2,300 feet landward of shoreline; geographic grid referenced to North American Datum of 1927; topography compiled from aerial photographs of April 1962; soundings in the harbor and to approximately 2,500 feet offshore referenced to Low Water Datum.



### Appendix C (continued)

- Map No: I-2237  
Title: Lake Michigan--Chicago Harbor--North and South Branches of the Chicago River  
Date: 1964  
Scale: 1:10,000  
Description: Map coverage along the Chicago lakefront from Chestnut Street to Congress Street; roads and railroads mapped to approximately 6,200 feet landward of the shoreline; geographic grid referenced to North American Datum of 1927; topography compiled from aerial photography of April 1962; soundings from the shoreline to approximately 8,000 feet offshore referenced to Low Water Datum; additional soundings along the North Branch Chicago River to Division Street and along the South Branch to 38th Place.
- Map No.: I-2240  
Title: Lake Michigan--Wilmette Harbor and North Shore Channel  
Date: 1964  
Scale: 1:5,000  
Description: Map coverage of the Wilmette Harbor vicinity; roads and railroads mapped to approximately 9,000 feet landward of shoreline; geographic grid referenced to North American Datum of 1927; topography compiled from aerial photography of April 1962; soundings in and around Wilmette Harbor from the shoreline to approximately 1,200 feet offshore in the area between the harbor entrance and the Wilmette Waterworks referenced to Low Water Datum; additional soundings along the North Shore Channel to Greenleaf Street.
- Map No.: I:2241  
Title: Lake Michigan--Calumet Harbor and Calumet River  
Date: 1964  
Scale: 1:10,000  
Description: Map coverage of Calumet Harbor and lower Calumet River; roads and railroads mapped to approximately 5300 feet landward of shoreline; geographic grid referenced to North American Datum of 1927; topography compiled from aerial photography of November 1961 and April 1962; soundings in and around Calumet Harbor and up the Calumet River to 108th Street; soundings referenced to Low Water Datum.



## Appendix C (continued)

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### 1975-1977 Mapping

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**Agency:** Illinois State Geological Survey

**Map No.:** Maps 1-54

**Title:** Illinois Coastal Zone Management Development Program

**Date:** 1975-77

**Scale:** 1:4,800

**Description:** Map appendix; hydrographic contour maps for the entire Illinois shore of Lake Michigan from the shoreline to 3,200 feet offshore; some areas are mapped to 6,800 feet offshore; 1-foot contour interval referenced to lake level at time of survey; soundings are not reported on the maps, but vertical profiles are shown at each survey line.

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### 1987-1988 Mapping

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**Agency:** Illinois State Geological Survey

**Title:** Nearshore Bathymetry--Chicago Northside Lakefront Wilson Avenue to Ohio Street

**Date:** 1987 (unpublished)

**Scale:** 1:12,000

**Description:** Bathymetric contour map from Montrose-Wilson Beach to Ohio Street Beach from the shoreline to 2,000 feet offshore; 1-foot contour interval; referenced to Low Water Datum.

**Agency:** U.S. Geological Survey

**Map No.:** USGS Map MF-2064

**Title:** Maps Showing the Bottom Topography of the Chicago Near-Northside Lakefront

**Date:** 1988

**Scale:** 1:12,000

**Description:** Bathymetric contour map from Montrose-Wilson Beach to Navy Pier from the shoreline to 2.5 miles offshore; 1.5-m contour interval referenced to Low Water Datum.



## **APPENDIX D**

### **NAUTICAL CHARTS**

#### **Appendix D Explanations**

- 1) Appendix D lists nautical charts of the Illinois coast of Lake Michigan published by the U.S. Lake Survey (USLS) followed by nautical charts published by the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS). NOAA-NOS assumed responsibility of producing Great Lakes nautical charts in October 1970.
- 2) Chart titles are the names given on the charts. Some chart titles have changed with time and in such cases both the original and revised titles are noted.
- 3) Scales are the nominal scales designated on the nautical charts.
- 4) Notation for the U.S. Lake Survey charts include the date of the first edition, last edition, and total number of editions. The last edition date is 1969 which is the last full year that the U.S. Lake Survey existed. Comparable notation is given for the NOAA charts except that most recent edition is listed which is defined as charts published up to 1992.
- 5) Following the list of nautical charts are two tables listing each of the edition years for nautical charts published by the U.S. Lake Survey and charts published by NOAA, National Ocean Service.
- 6) An important factor regarding the nautical charts is that the edition dates do not reflect new information regarding shorelines, blufflines, or overall nearshore bathymetry. The editions incorporate changes that typically do not require new surveys such as showing new aids to navigation, new obstructions, and new upland cultural features. The primary source for the chart topography and bathymetry are topographic and hydrographic surveys, and aerial photographic surveys specifically for chart production. The most recent surveys are the dates for the topographic and hydrographic information, not the chart edition date.
- 7) This inventory includes all nautical charts of the Illinois coast except for the regional (1:500,000) chart covering all of Lake Michigan (U.S. Lake Survey Chart No. 7; NOAA-NOS Chart No. 14901) and the Small Craft Book Chart of Chicago and the Indiana lakeshore (NOAA-NOS Chart No. 14926).







## Appendix D (continued)

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### U.S. Lake Survey Nautical Charts (1800s)

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#### Coast Chart No. 4

Title: Lake Michigan Coast Chart No. 4,  
Chicago to Kenosha  
Date: 1877  
Scale: 1:80,000  
Description: Chart coverage from Kenosha, Wisconsin to south of Chicago Loop; roads, railroads, and land use information mapped to approximately 8,000 feet landward of shoreline; longitudes based on Fort Howard astronomical station adopted in 1874; latitudes derived geodetically from Fort Howard; soundings to approximately 150,000 feet offshore referenced to 3.06 feet below High Water of 1838; chart based on surveys conducted in 1872, 1873, and 1874.

#### Coast Chart No. 5

Title: Lake Michigan Coast Chart No. 5,  
New Buffalo to Chicago  
Date: 1876  
Scale: 1:80,000  
Description: Chart coverage from south of Chicago to New Buffalo, Michigan; roads, railroads, and land use information mapped to approximately 8,000 feet landward of shoreline; longitudes based on Fort Howard astronomical station adopted in 1874; latitudes derived geodetically from Fort Howard; soundings to approximately 150,000 feet offshore referenced to 3.06 feet below High Water of 1838; chart based on surveys conducted in 1871, 1872, 1873, and 1874.

Note: These two charts result from the 1871 through 1874 surveys of the Illinois coast. These charts had these single publication dates with no subsequent editions. The U.S. Lake Survey was disbanded in 1882, and when reestablished in 1901 these two charts were replaced in 1913 and in 1914 by a new format Chart No. 4 and 5 at 1:120,000 scale. These subsequent later charts No. 4 and 5 were later renumbered Chart No. 74 and 75 respectively.



## Appendix D (continued)

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### U.S. Lake Survey Nautical Charts (1900s)

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<u>Chart No. 4</u>	See information for Chart No. 74. Chart No. 4 was renumbered Chart No. 74 in the mid-1900s.
<u>Chart No. 5</u>	See information for Chart No. 75. Chart No. 5 was renumbered Chart No. 75 in the mid-1900s.
<u>Chart No. 74</u>	(Present coverage by NOAA-NOS Chart No. 14904)
Original Title:	Lake Michigan
Revised Title:	Lake Michigan: Ten Miles North of Port Washington to Waukegan, Ill.
USLS First Edition:	1914
USLS Last Edition:	1969
Number of Editions:	16
Scale:	1:120,000
Description:	Chart coverage from north of Port Washington, Wisconsin to Waukegan, Illinois; roads and railroads mapped to approximately 30,000 feet landward of shoreline; soundings to approximately 150,000 feet offshore referenced to Low Water Datum.
<u>Chart No. 75</u>	(Present coverage by NOAA-NOS Chart No. 14905)
Original Title:	Lake Michigan
Revised Title:	Lake Michigan: Waukegan, Ill. to South Haven, Mich.
USLS First Edition:	1913
USLS Last Edition:	1969
Number of Editions:	17
Scale:	1:120,000
Description:	Chart coverage from north of Waukegan, Illinois to South Haven, Michigan; roads and railroads mapped to approximately 25,000 feet landward of shoreline; soundings to approximately 150,000 feet offshore referenced to Low Water Datum.



## Appendix D (continued)

Chart No. 751 (Present coverage by NOAA-NOS Chart No. 14927)

Title: Chicago Lake Front  
USLS First Edition: 1934  
USLS Last Edition: 1969  
Number of Editions: 13  
Scale: 1:15,000  
Description: Chart coverage from Wilmette, Illinois to South Haven, Michigan; roads and railroads mapped to approximately 10,000 feet landward of shoreline; soundings to approximately 16,000 feet offshore referenced to Low Water Datum.

Chart No. 752 (Present coverage by NOAA-NOS Chart No. 14928)

Title: Chicago Harbor  
USLS First Edition: 1933  
USLS Last Edition: 1969  
Number of Editions: 13  
Scale: 1:15,000  
Description: Chart coverage from Belmont Harbor to the Oakland Shoal area of Chicago's south side lakefront; roads and railroads mapped to approximately 10,000 feet landward of shoreline; soundings to approximately 16,000 feet offshore referenced to Low Water Datum.

Chart No. 755 (Present coverage by NOAA-NOS Chart No. 14929)

Title: Calumet and Indiana Harbors  
USLS First Edition: 1933  
USLS Last Edition: 1969  
Number of Editions: 13  
Scale: 1:15,000  
Description: Chart coverage from Calumet Harbor, Illinois to Buffington Harbor, Indiana; roads and railroads mapped to approximately 25,000 feet landward of shoreline; soundings to approximately 25,000 feet offshore referenced to Low Water Datum.



## Appendix D (continued)

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### NOAA, National Ocean Service Nautical Charts

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<u>Chart No. 14904</u>	(Previous coverage by U.S. Lake Survey Chart No. 74)
Title:	Port Washington to Waukegan
NOS First Edition:	1972
NOS Recent Edition:	1990
Number of Editions:	5 (Total number of editions = 21; USLS plus NOS)
Scale:	1:120,000
Description:	Chart coverage from north of Port Washington, Wisconsin to Waukegan, Illinois; roads and railroads mapped to approximately 30,000 feet landward of shoreline; soundings to approximately 150,000 feet offshore referenced to Low Water Datum; includes inset chart of Waukegan Harbor (scale 1:10,000).
<u>Chart No. 14905</u>	(Previous coverage by U.S. Lake Survey Chart No. 75)
Title:	Waukegan to South Haven
NOS First Edition:	1972
NOS Recent Edition:	1991
Number of Editions:	9 (Total number of editions = 26; USLS plus NOS)
Scale:	1:120,000
Description:	Chart coverage from north of Waukegan, Illinois to South Haven, Michigan; roads and railroads mapped to approximately 25,000 feet landward of shoreline; soundings to approximately 150,000 feet offshore referenced to Low Water Datum.





#### Appendix D (continued)

Chart No. 14927 (Previous coverage by U.S. Lake Survey  
Chart No. 751)

Title: Chicago Lake Front - Wilmette to Gary  
NOS First Edition: 1972  
NOS Recent Edition: 1992  
Number of Editions: 9 (Total number of editions = 22; USLS plus NOS)  
Scale: 1:60,000  
Description: Chart coverage from Wilmette, Illinois to Gary Harbor, Indiana; roads and railroads mapped to approximately 25,000 feet landward of shoreline; soundings to approximately 85,000 feet offshore referenced to Low Water Datum.

Chart No. 14928 (Previous coverage by U.S. Lake Survey  
Chart No. 752)

Title: Chicago Harbor  
NOS First Edition: 1972  
NOS Recent Edition: 1991  
Number of Editions: 6 (Total number of editions = 19; USLS plus NOS)  
Scale: 1:15,000  
Description: Chart coverage from Belmont Harbor to the Oakland Shoal area of Chicago's south side lakefront; roads and railroads mapped to approximately 10,000 feet landward of shoreline; soundings to approximately 16,000 feet offshore referenced to Low Water Datum.

Chart No. 14929 Previous coverage by U.S. Lake Survey  
Chart No. 755)

Title: Calumet, Indiana and Buffington Harbors, and Lake Calumet  
NOS First Edition: 1972  
NOS Recent Edition: 1990  
Number of Editions: 6 (Total number of editions = 19; USLS plus NOS)  
Scale: 1:15,000  
Description: Chart coverage from Calumet Harbor, Illinois to Buffington Harbor, Indiana; roads and railroads mapped to approximately 25,000 feet landward of shoreline; soundings to approximately 25,000 feet offshore referenced to Low Water Datum.



**Appendix D (continued)**

**Nautical Chart Edition Numbers and Years**

U.S. Lake Survey Chart No. 74  
(Initially U.S. Lake Survey Chart No. 4)  
and subsequent  
NOAA-NOS Chart No. 14904

Chart Title: Port Washington to Waukegan Scale: 1:120,000

U.S. Lake Survey Chart No. 74		NOAA-NOS Chart No. 14904	
<u>Edition No.</u>	<u>Edition Year</u>	<u>Edition No.</u>	<u>Edition Year</u>
1	1914	17	1972
2	1924	18	1975
3	1930	19	1979
4	1933	20	1985
5	1936	21	1990
6	1938	(No chart editions for 1991 or 1992)	
7	1941		
8	1944		
9	1947		
10	1950		
11	1955		
12	1957		
13	1960		
14	1963		
15	1966		
16	1969		



**Appendix D (continued)**

**Nautical Chart Edition Numbers and Years**

U.S. Lake Survey Chart No. 75  
(Initially U.S. Lake Survey Chart No. 5)  
and subsequent  
NOAA-NOS Chart No. 14905

Chart Title: Waukegan, IL to South Haven, MI Scale: 1:120,000

U.S. Lake Survey Chart No. 75		NOAA-NOS Chart No. 14905	
<u>Edition No.</u>	<u>Edition Year</u>	<u>Edition No.</u>	<u>Edition Year</u>
1	1913	18	1972
2	1919	19	1975
3	1924	20	1977
4	1930	21	1979
5	1932	22	1981
6	1935	23	1983
7	1939	24	1986
8	1942	25	1988
9	1944	26	1991
10	1947	(No chart editions for 1992)	
11	1950		
12	1954		
13	1957		
14	1960		
15	1963		
16	1966		
17	1969		



**Appendix D (continued)**

**Nautical Chart Edition Numbers and Years**

U.S. Lake Survey Chart No. 751  
and subsequent  
NOAA-NOS Chart No. 14927

Chart Title: Chicago Lake Front Scale: 1:60,000

<b>U.S. Lake Survey Chart No. 751</b>		<b>NOAA-NOS Chart No. 14927</b>	
<u>Edition No.</u>	<u>Edition Year</u>	<u>Edition No.</u>	<u>Edition Year</u>
1	1934	14	1972
2	1937	15	1975
3	1939	16	1977
4	1942	17	1979
5	1945	18	1983
6	1947	19	1985
7	1951	20	1990
8	1954	21	1991
9	1959	22	1992
10	1960		
11	1963		
12	1966		
13	1969		





**Appendix D (continued)**

**Nautical Chart Edition Numbers and Years**

U.S. Lake Survey Chart No. 752  
and subsequent  
NOAA-NOS Chart No. 14928

Chart Title: Chicago Harbor Scale: 1:15,000

U.S. Lake Survey Chart No. 752		NOAA-NOS Chart No. 14928	
<u>Edition No.</u>	<u>Edition Year</u>	<u>Edition No.</u>	<u>Edition Year</u>
1	1933	14	1972
2	1935	15	1975
3	1938	16	1978
4	1942	17	1983
5	1944	18	1987
6	1947	19	1991
7	1950	(No chart edition for 1992)	
8	1954		
9	1957		
10	1960		
11	1963		
12	1966		
13	1969		



↑  
**Appendix D (continued)**

**Nautical Edition Numbers and Years**

U.S. Lake Survey Nautical Chart No. 755  
and subsequent  
NOAA-NOS Nautical Chart No. 14929

Chart Title: Calumet and Indiana Harbors Scale: 1:15,000

<b>U.S. Lake Survey Chart No. 755</b>		<b>NOAA-NOS Chart No. 14929</b>	
<u>Edition No.</u>	<u>Edition Year</u>	<u>Edition No.</u>	<u>Edition Year</u>
1	1933	14	1972
2	1937	15	1975
3	1938	16	1979
4	1942	17	1983
5	1944	18	1986
6	1948	19	1990
7	1951	(No chart editions for 1991 or 1992)	
8	1954		
9	1957		
10	1960		
11	1963		
12	1966		
13	1969		



## **APPENDIX E**

### **U.S. GEOLOGICAL SURVEY 7.5-MINUTE QUADRANGLES**

#### **Appendix E Explanation**

- 1) Quadrangles are listed in geographical order from north to south along the Illinois coast.
- 2) Quadrangles are grouped according to the most recent map date which for maps published after 1972 is the date of photorevision or photoinspection.



Appendix E (continued)

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1928-1929 Mapping

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Title:	Zion Quadrangle
Note:	Area of present-day 7.5-Minute Zion Quadrangle only covered by 15' Waukegan Quadrangle at this time
Title:	Waukegan Quadrangle
Note:	Area of present-day 7.5-Minute Waukegan Quadrangle only covered by 15' Waukegan Quadrangle at this time
Title:	Highland Park Quadrangle
Date:	1928 (Reprinted 1930, 1938, 1947)
Scale:	1:24,000
Description:	Quad covers shoreline from Forest Park, Lake Forest (42°15'00") to Winnetka (42°07'30")
Title:	Evanston Quadrangle
Date:	1928 (Reprinted 1931)
Scale:	1:24,000
Description:	Quad covers shoreline from Glencoe (42°07'30") to Loyola University in Chicago (42°00'30")
Title:	Evanston Quadrangle
Date:	1937 (Reprinted 1939)
Scale:	1:24,000
Description:	Quad covers shoreline from Glencoe (42°07'30") to Loyola University in Chicago (42°00'30")
Title:	Chicago Loop Quadrangle
Date:	1929
Scale:	1:24,000
Description:	Quad covers shoreline from Loyola University in Chicago (42°00'00") to Chicago Harbor (41°52'30")
Title:	Chicago Loop Quadrangle
Date:	1936 (Reprinted 1939)
Scale:	1:24,000
Description:	Quad covers shoreline from Loyola University in Chicago (42°00'00") to Chicago Harbor (41°52'30")





## Appendix E (continued)

Title: Jackson Park Quadrangle  
Date: 1929  
Scale: 1:24,000  
Description: Quad covers shoreline from Chicago Harbor (41°52'30") to South of Rainbow Park (41°45'00")

Title: Jackson Park Quadrangle  
Date: 1936 (Reprinted 1939)  
Scale: 1:24,000  
Description: Quad covers shoreline from Chicago Harbor (41°52'30") to South of Rainbow Park (41°45'00")

Title: Calumet Lake Quadrangle  
Date: 1929  
Scale: 1:24,000  
Description: Quad covers shoreline from north of Calumet Harbor (41°45'00") to Hammond, Indiana corporate boundary (41°46'15")  
Note: This quadrangle is presently named Lake Calumet

Title: Calumet Lake Quadrangle  
Date: 1938 (Reprinted 1939)  
Scale: 1:24,000  
Description: Quad covers shoreline from north of Calumet Harbor (41°45'00") to Hammond, Indiana corporate boundary (41°46'15")  
Note: This quadrangle is presently named Lake Calumet

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## 1951-1956 Mapping

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Title: Zion Quadrangle  
Note: Area of present-day 7.5-Minute Zion Quadrangle only covered by 15' Waukegan Quadrangle at this time

Title: Waukegan Quadrangle  
Note: Area of present-day 7.5-Minute Waukegan Quadrangle only covered by 15-Minute Waukegan Quadrangle at this time



## Appendix E (continued)

Title: Highland Park Quadrangle  
Date: 1951  
Scale: 1:24,000  
Description: Quad covers shoreline from Forest Park, Lake Forest (42°15'00") to Winnetka (42°07'30")

Title: Highland Park Quadrangle  
Date: 1953 (Reprinted 1955)  
Scale: 1:24,000  
Description: Quad covers shoreline from Forest Park, Lake Forest (42°15'00") to Winnetka (42°07'30")

Title: Evanston Quadrangle  
Date: 1953 (Reprinted 1955)  
Scale: 1:24,000  
Description: Quad covers shoreline from Glencoe (42°07'30") to Loyola University in Chicago (42°00'30")

Title: Chicago Loop Quadrangle  
Date: 1953  
Scale: 1:24,000  
Description: Quad covers shoreline from Loyola University in Chicago (42°00'00") to Chicago Harbor (41°52'30")

Title: Jackson Park Quadrangle  
Date: 1953 (Reprinted 1956)  
Scale: 1:24,000  
Description: Quad covers shoreline from Chicago Harbor (41°52'30") to South of Rainbow Park (41°45'00")

Title: Calumet Lake Quadrangle  
Date: 1953 (Reprinted 1955)  
Scale: 1:24,000  
Description: Quad covers shoreline from north of Calumet Harbor (41°45'00") to Hammond, Indiana corporate boundary (41°46'15")

Note: This quadrangle is presently named Lake Calumet



## Appendix E (continued)

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### 1960-1965 Mapping

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Title: Zion Quadrangle  
Date: 1960 (Reprinted 1962)  
Scale: 1:24,000  
Description: Quad covers shoreline from one-half mile north of Illinois/Wisconsin state line (42°30'00") to one-half mile north of Waukegan Harbor (42°22'30")

Title: Waukegan Quadrangle  
Date: 1960  
Scale: 1:24,000  
Description: Quad covers shoreline from one-half mile north of Waukegan Harbor (42°22'30") to Forest Park, Lake Forest (42°15'00")

Title: Highland Park Quadrangle  
Date: 1963 (Reprinted 1964)  
Scale: 1:24,000  
Description: Quad covers shoreline from Forest Park, Lake Forest (42°15'00") to Winnetka (42°07'30")

Title: Evanston Quadrangle  
Date: 1963 (Reprinted 1964)  
Scale: 1:24,000  
Description: Quad covers shoreline from Glencoe (42°07'30") to Loyola University in Chicago (42°00'30")

Title: Chicago Loop Quadrangle  
Date: 1963 (Reprinted 1964)  
Scale: 1:24,000  
Description: Quad covers shoreline from Loyola University in Chicago (42°00'00") to Chicago Harbor (41°52'30")

Title: Jackson Park Quadrangle  
Date: 1963 (Reprinted 1964)  
Scale: 1:24,000  
Description: Quad covers shoreline from Chicago Harbor (41°52'30") to south of Rainbow Park (41°45'00")



## Appendix E (continued)

Title: Lake Calumet Quadrangle  
Date: 1960 (Reprinted 1962)  
Scale: 1:24,000  
Description: Quad covers shoreline from north of Calumet Harbor (41°45'00") to Hammond, Indiana municipal boundary (41°46'15")

Title: Lake Calumet Quadrangle  
Date: 1965  
Scale: 1:24,000  
Description: Quad covers shoreline from north of Calumet Harbor (41°45'00") to Hammond, Indiana municipal boundary (41°46'15")

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### 1972-1978 Mapping

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Title: Zion Quadrangle  
Date: 1960 (Photorevised 1972)  
Scale: 1:24,000  
Description: Quad covers shoreline from one-half mile north of Illinois/Wisconsin state line (42°30'00") to one-half mile north of Waukegan Harbor (42°22'30")

Title: Waukegan Quadrangle  
Date: 1960 (Photorevised 1972)  
Scale: 1:24,000  
Description: Quad covers shoreline from one-half mile north of Waukegan Harbor (42°22'30") to Forest Park, Lake Forest (42°15'00")

Title: Highland Park Quadrangle  
Date: 1963 (Photorevised 1972)  
Scale: 1:24,000  
Description: Quad covers shoreline from Forest Park, Lake Forest (42°15'00") to Winnetka (42°07'30")

Title: Evanston Quadrangle  
Date: 1963 (Photorevised 1972)  
Scale: 1:24,000  
Description: Quad covers shoreline from Glencoe (42°07'30") to Loyola University in Chicago (42°00'30")





## Appendix E (continued)

Title:	Evanston Quadrangle
Date:	1963 (Photorevised 1972; Photoinspected 1978)
Scale:	1:24,000
Description:	Quad covers shoreline from Glencoe (42°07'30") to Loyola University in Chicago (42°00'30")
Title:	Chicago Loop Quadrangle
Date:	1963 (Photorevised 1972)
Scale:	1:24,000
Description:	Quad covers shoreline from Loyola University in Chicago (42°00'00") to Chicago Harbor (41°52'30")
Title:	Chicago Loop Quadrangle
Date:	1963 (Photorevised 1972; Photoinspected 1978)
Scale:	1:24,000
Description:	Quad covers shoreline from Loyola University in Chicago (42°00'00") to Chicago Harbor (41°52'30")
Title:	Jackson Park Quadrangle
Date:	1963 (Photorevised 1972)
Scale:	1:24,000
Description:	Quad covers shoreline from Chicago Harbor (41°52'30") to south of Rainbow Park (41°45'00")
Title:	Lake Calumet Quadrangle
Date:	1965 (Photorevised 1973)
Scale:	1:24,000
Description:	Quad covers shoreline from north of Calumet Harbor (41°45'00") to Hammond, Indiana corporate boundary (41°46'15")
Title:	Lake Calumet Quadrangle
Date:	1965 (Photorevised 1973; Photoinspected 1977)
Scale:	1:24,000
Description:	Quad covers shoreline from north of Calumet Harbor (41°45'00") to Hammond, Indiana municipal boundary (41°46'15")



## Appendix E (continued)

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### 1980 Mapping

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Title: Zion Quadrangle  
Date: 1960 (Photorevised 1972; 1980)  
Scale: 1:24,000  
Description: Quad covers shoreline from one-half mile north of Illinois/Wisconsin state line (42°30'00") to one-half mile north of Waukegan Harbor (42°22'30")

Title: Waukegan Quadrangle  
Date: 1960 (Photorevised 1972; 1980)  
Scale: 1:24,000  
Description: Quad covers shoreline from one-half mile north of Waukegan Harbor (42°22'30") to Forest Park, Lake Forest (42°15'00")

Title: Highland Park Quadrangle  
Date: 1963 (Photorevised 1972; 1980)  
Scale: 1:24,000  
Description: Quad covers shoreline from Forest Park, Lake Forest (42°15'00") to Winnetka (42°07'30")

Note: 1) No 1980 photorevisions for the Evanston, Chicago Loop, Jackson Park, and Lake Calumet Quadrangles.

2) No quadrangle revisions for the Illinois coast between 1981 and this inventory completed in 1992.



## APPENDIX F

### VERTICAL AERIAL PHOTOGRAPHS (Scale Greater Than or Equal to 1:24,000)

#### Appendix F Explanation

- 1) This appendix is primarily a listing from the Aerial Photography Summary Record System (APSRs) with addition of source data compiled for this study. The presentation format essentially follows that of the APSRS. Although referred to as vertical aerial photography, this is actually near-vertical aerial photography with varying degrees of X-tilt and Y-tilt.
- 2) Source agencies are listed in alphabetical order.
- 3) The latitude and longitude is the southeast corner of the U.S. Geological Survey quadrangle that contains the photographic record.
- 4) Date of coverage may be the date the project was completed, not the actual date each photograph was taken.
- 5) The project code is that given by the source agency.
- 6) Focal length of the camera is given in millimeters.
- 7) The notation of sensor type designates whether the camera used was metric (Vertical Carto (Implies Stereo)) or reconnaissance.
- 8) Cloud cover designates the percentage of the image or strip of images where the ground is not visible due to clouds.
- 9) Quadrangle coverage is the percentage of the U.S. Geological Survey quadrangle covered by this record.
- 10) Remarks contains information provided by the source agency. For USGS-held records on strip accessions, this field contains the Scene Identification Number, the first frame in the strip, the last frame in the strip, and the microfilm roll and frame number. For USGS-held records on photoindices, this field contains the microfilm roll number and frame number. Details regarding the remarks requires contacting the source agency.



Appendix F (continued)

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1939 Photography

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Agency	NATIONAL ARCHIVES AND RECORDS ADMINISTRATION
Latitude	415230N
Longitude	0873730W
Quadrangle	Chicago Loop
Date of Coverage	1939
Project Code	BWX
Scale	1:20,000
Focal Length	8.25in or 210mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%
Remarks	ASCS PROJECT

Agency	NATIONAL ARCHIVES AND RECORDS ADMINISTRATION
Latitude	420730N
Longitude	0874500W
Quadrangle	Highland Park
Date of Coverage	1939
Project Code	BWX
Scale	1:20,000
Focal Length	8.25in or 210mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	80%
Remarks	ASCS PROJECT





## Appendix F (continued)

Agency	NATIONAL ARCHIVES AND RECORDS ADMINISTRATION
Latitude	421500N
Longitude	0874500W
Quadrangle	Waukegan
Date of Coverage	1939
Project Code	BWX
Scale	1:20,000
Focal Length	8.25in or 210mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%
Remarks	ASCS PROJECT

Agency	NATIONAL ARCHIVES AND RECORDS ADMINISTRATION
Latitude	422230N
Longitude	0874500W
Quadrangle	Zion
Date of Coverage	1939
Project Code	BWX
Scale	1:20,000
Focal Length	8.25in or 210mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%
Remarks	ASCS PROJECT



## Appendix F (continued)

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### 1949 Photography

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Agency	CHICAGO AERIAL SURVEY (GEONEX as of 1990)
Date of Coverage	1949
Project Code	Not Specified
Scale	1:800
Focal Length	12.0in or 305mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%

Agency	CHICAGO AERIAL SURVEY (GEONEX as of 1990)
Latitude	415230N
Longitude	0873730W
Quadrangle	Chicago Loop
Date of Coverage	1949
Project Code	29001
Scale	1:9,600
Focal Length	12.0in or 305mm
Film Type	Black and White Infrared
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%



## Appendix F (continued)

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### 1952 Photography

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Agency	U.S. GEOLOGICAL SURVEY
Latitude	420730N
Longitude	0874500W
Quadrangle	Highland Park
Date of Coverage	1952 Apr 08
Project Code	SA
Scale	1:23,600
Focal Length	Other
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%
Remarks	0010 0051

Agency	U.S. GEOLOGICAL SURVEY
Latitude	415230N
Longitude	0873730W
Quadrangle	Chicago Loop
Date of Coverage	1952 April 08
Project Code	SA
Scale	1:23,600
Focal Length	Other
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%
Remarks	0010 0059



## Appendix F (continued)

Agency	U.S. GEOLOGICAL SURVEY
Latitude	420000N
Longitude	0873730W
Quadrangle	Evanston
Date of Coverage	1952 April 08
Project Code	SA
Scale	1:23,600
Focal Length	Other
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%
Remarks	0010 0050

Agency	U.S. GEOLOGICAL SURVEY
Latitude	420730N
Longitude	0874500W
Quadrangle	Highland Park
Date of Coverage	1952 April 08
Project Code	SA
Scale	1:23,600
Focal Length	Other
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%
Remarks	0010 0051





## Appendix F (continued)

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### 1953 Photography

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Agency	U.S. GEOLOGICAL SURVEY
Latitude	421500N
Longitude	0874500W
Quadrangle	Waukegan
Date of Coverage	1953 May 26
Project Code	YI
Scale	1:23,662
Focal Length	Other
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%
Remarks	0040 0360

Agency	U.S. GEOLOGICAL SURVEY
Latitude	422230N
Longitude	0874500W
Quadrangle	Zion
Date of Coverage	1953 May 26
Project Code	YI
Scale	1:23,662
Focal Length	Other
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%
Remarks	0040 0361



## Appendix F (continued)

Agency	U.S. GEOLOGICAL SURVEY
Latitude	421500N
Longitude	0874500W
Quadrangle	Waukegan
Date of Coverage	1953 May 26
Project Code	YI
Scale	1:23,662
Focal Length	Other
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%
Remarks	0040 0360

Agency	U.S. GEOLOGICAL SURVEY
Latitude	422230N
Longitude	0874500W
Quadrangle	Zion
Date of Coverage	1953 May 26
Project Code	YI
Scale	1:23,662
Focal Length	Other
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%
Remarks	0040 0361



## Appendix F (continued)

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### 1954 Photography

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Agency	AGRICULTURAL STABILIZATION & CONSERVATION SERVICE, U.S. DEPARTMENT OF AGRICULTURE
Latitude	420730N
Longitude	0874500W
Quadrangle	Highland Park
Date of Coverage	1954 Jul 19
Project Code	BWX
Scale	20,000
Focal Length	8.25in or 210mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	80%
Remarks	01

Agency	AGRICULTURAL STABILIZATION & CONSERVATION SERVICE, U.S. DEPARTMENT OF AGRICULTURE
Latitude	421500N
Longitude	0874500W
Quadrangle	Waukegan
Date of Coverage	1954 Jul 19
Project Code	BWX
Scale	1:20,000
Focal Length	8.25in or 210mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%
Remarks	01



## Appendix F (continued)

Agency	AGRICULTURAL STABILIZATION & CONSERVATION SERVICE, U.S. DEPARTMENT OF AGRICULTURE
Latitude	422230N
Longitude	0874500W
Quadrangle	Zion
Date of Coverage	1954 Jul 19
Project Code	BWX
Scale	1:20,000
Focal Length	8.25in or 210mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%
Remarks	01

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## 1955 Photography

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Agency	CHICAGO AERIAL SURVEY (GEONEX as of 1990)
Latitude	415230N
Longitude	0873730W
Quadrangle	Chicago Loop
Date of Coverage	1955
Project Code	35060
Scale	1:9,600
Focal Length	12.0IN OR 305MM
Film Type	Black and White Infrared
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%





## Appendix F (continued)

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### 1956 Photography

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Agency	CHICAGO AERIAL SURVEY (GEONEX as of 1990)
County	Lake and Cook
Date of Coverage	1956 May 7
Project Code	Not Specified
Scale	1:200
Focal Length	Not Specified
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%

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### 1957 Photography

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Agency	CHICAGO AERIAL SURVEY (GEONEX as of 1990)
County	Lake and Cook
Date of Coverage	1957 April 21
Project Code	37047
Scale	1:200
Focal Length	Not Specified
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%



## Appendix F (continued)

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### 1958 Photography

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Agency	U.S. GEOLOGICAL SURVEY
Latitude	421500N
Longitude	0874500W
Quadrangle	Waukegan
Date of Coverage	1958 Apr 25
Project Code	CFQ
Scale	1:20,000
Focal Length	Other
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%
Remarks	0002 0508

Agency	U.S. GEOLOGICAL SURVEY
Latitude	422230N
Longitude	0874500W
Quadrangle	Zion
Date of Coverage	1958 Apr 25
Project Code	CFQ
Scale	1:20,000
Focal Length	Other
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%
Remarks	0002 0515



## Appendix F (continued)

Agency	CHICAGO AERIAL SURVEY (GEONEX as of 1990)
Latitude	420730N
Longitude	0874500W
Quadrangle	Highland Park
Date of Coverage	1958
Project Code	38358
Scale	1:12,000
Focal Length	12.0in or 305mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	80%

Agency	CHICAGO AERIAL SURVEY (GEONEX as of 1990)
Latitude	421500N
Longitude	0874500W
Quadrangle	Waukegan
Date of Coverage	1958
Project Code	38358
Scale	1:12,000
Focal Length	12.0in or 305mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%

Agency	CHICAGO AERIAL SURVEY (GEONEX as of 1990)
Latitude	422230N
Longitude	0874500W
Quadrangle	Zion
Date of Coverage	1958
Project Code	38358
Scale	1:12,000
Focal Length	12.0in or 305mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%



## Appendix F (continued)

Agency	CHICAGO AERIAL SURVEY (GEONEX as of 1990)
Latitude	415230N
Longitude	0874500W
Quadrangle	Chicago Loop
Date of Coverage	1958
Project Code	38030
Scale	1:12,000
Focal Length	12.0in or 305mm
Film Type	Black and White Infrared
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%

Agency	CHICAGO AERIAL SURVEY (GEONEX as of 1990)
County	Cook and Lake
Date of Coverage	1958 April 7
Project Code	38038
Scale	1:200
Focal Length	Not Specified
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%

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## 1959 Photography

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Agency	CHICAGO AERIAL SURVEY (GEONEX as of 1990)
County	Lake and Cook
Date of Coverage	1959 April 6
Project Code	39034
Scale	1:200
Focal Length	Not Specified
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%





## Appendix F (continued)

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### 1960 Photography

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Agency	CHICAGO AERIAL SURVEY (GEONEX as of 1990)
Latitude	415230N
Longitude	0873730W
Quadrangle	Chicago Loop
Date of Coverage	1960
Project Code	60085
Scale	1:24,000
Focal Length	6.00in or 152mm
Film Type	Black and White Infrared
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%

Agency	CHICAGO AERIAL SURVEY (GEONEX as of 1990)
County	Lake and Cook
Date of Coverage	1960 April 10
Project Code	40098 23
Scale	1:200
Focal Length	Not Specified
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%



## Appendix F (continued)

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### 1961 Photography

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Agency	AGRICULTURAL STABILIZATION & CONSERVATION SERVICE, U.S. DEPARTMENT OF AGRICULTURE
Latitude	420730N
Longitude	0874500W
Quadrangle	Highland Park
Date of Coverage	1961 Sep 18
Project Code	BWX
Scale	1:20,000
Focal Length	8.25in or 210mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	80%
Remarks	04

Agency	AGRICULTURAL STABILIZATION & CONSERVATION SERVICE, U.S. DEPARTMENT OF AGRICULTURE
Latitude	421500N
Longitude	0874500W
Quadrangle	Waukegan
Date of Coverage	1961 Sep 18
Project Code	BWX
Scale	1:20,000
Focal Length	8.25in or 210mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%
Remarks	04



## Appendix F (continued)

Agency	AGRICULTURAL STABILIZATION & CONSERVATION SERVICE, U.S. DEPARTMENT OF AGRICULTURE
Latitude	422230N
Longitude	0874500W
Quadrangle	Zion
Date of Coverage	1961 Sep 18
Project Code	BWX
Scale	1:20,000
Focal Length	8.25in or 210mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%
Remarks	04

Agency	CHICAGO AERIAL SURVEY (GEONEX as of 1990)
Latitude	415230N
Longitude	0873730W
Quadrangle	Chicago Loop
Date of Coverage	1961
Project Code	261200
Scale	1:24,000
Focal Length	6.00in or 152mm
Film Type	Black and White Infrared
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%

Agency	CHICAGO AERIAL SURVEY (GEONEX as of 1990)
Latitude	420730N
Longitude	0874500W
Quadrangle	Highland Park
Date of Coverage	1961
Project Code	261200
Scale	1:24,000
Focal Length	6.00in or 152mm
Film Type	Black and White Infrared
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	80%



## Appendix F (continued)

Agency	CHICAGO AERIAL SURVEY (GEONEX as of 1990)
Latitude	421500N
Longitude	0874500W
Quadrangle	Waukegan
Date of Coverage	1961
Project Code	261200
Scale	1:24,000
Focal Length	6.00in or 152mm
Film Type	Black and White Infrared
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%

Agency	CHICAGO AERIAL SURVEY (GEONEX as of 1990)
Latitude	422230N
Longitude	0874500W
Quadrangle	Zion
Date of Coverage	1961
Project Code	261200
Scale	1:24,000
Focal Length	6.00in or 152mm
Film Type	Black and White Infrared
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%

Agency	SIDWELL COMPANY
County	Lake and Cook
Date of Coverage	1961 April 2
Project Code	61003
Scale	1:200
Focal Length	Not Specified
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%





## Appendix F (continued)

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### 1962 Photography

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Agency	U.S. GEOLOGICAL SURVEY
Latitude	415230N
Longitude	0873730W
Quadrangle	Chicago Loop
Date of Coverage	1962 Apr 20
Project Code	VAHU
Scale	1:23,866
Focal Length	Other
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%
Remarks	0014 0200

Agency	U.S. GEOLOGICAL SURVEY
Latitude	420000N
Longitude	0873730W
Quadrangle	Evanston
Date of Coverage	1962 Apr 20
Project Code	VAHU
Scale	1:24,000
Focal Length	Other
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%
Remarks	0014 0201



## Appendix F (continued)

Agency	U.S. GEOLOGICAL SURVEY
Latitude	420730N
Longitude	0874500W
Quadrangle	Highland Park
Date of Coverage	1962 Apr 20
Project Code	VAHU
Scale	1:23,866
Focal Length	Other
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%
Remarks	0014 0203

Agency	CHICAGO AERIAL SURVEYS (GEONEX as of 1990)
County	Lake and Cook
Date of Coverage	1962 April 20
Project Code	42012
Scale	1:200
Focal Length	Not Specified
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%

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## 1963 Photography

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Agency	U.S GEOLOGICAL SURVEY
Latitude	415230N
Longitude	0873730W
Quadrangle	Chicago Loop
Date of Coverage	1963 Jun 12
Project Code	VAHUX
Scale	1:10,000
Focal Length	Other
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%
Remarks	0092 0443



## Appendix F (continued)

Agency	CHICAGO AERIAL SURVEY (GEONEX as of 1990)
Latitude	415230N
Longitude	0873730W
Quadrangle	Chicago Loop
Date of Coverage	1963
Project Code	63400
Scale	1:24,000
Focal Length	12.0in or 305mm
Film Type	Black and White Infrared
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%

Agency	CHICAGO AERIAL SURVEY (GEONEX as of 1990)
Latitude	420730N
Longitude	0874500W
Quadrangle	Highland Park
Date of Coverage	1963
Project Code	63400
Scale	1:24,000
Focal Length	12.0in or 305mm
Film Type	Black and White Infrared
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	80%

Agency	CHICAGO AERIAL SURVEY (GEONEX as of 1990)
Latitude	421500N
Longitude	0874500W
Quadrangle	Waukegan
Date of Coverage	1963
Project Code	63400
Scale	1:24,000
Focal Length	12.0in or 305mm
Film Type	Black and White Infrared
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%



## Appendix F (continued)

Agency	CHICAGO AERIAL SURVEY
	GEONEX as of 1990)
Latitude	422230N
Longitude	0874500W
Quadrangle	Zion
Date of Coverage	1963
Project Code	63400
Scale	1:24,000
Focal Length	12.0in or 305mm
Film Type	Black and White Infrared
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%

Agency	CHICAGO AERIAL SURVEY
	(GEONEX as of 1990)
County	Lake and Cook
Date of Coverage	1963 April 11
Project Code	Not Specified
Scale	1:200
Focal Length	Not Specified
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%

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### 1964 Photography

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Agency	SIDWELL COMPANY
County	Lake and Cook
Date of Coverage	1964 April 16
Project Code	64010
Scale	1:200
Focal Length	Not Specified
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%





## Appendix F (continued)

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### 1965 Photography

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Agency	SIDWELL COMPANY
County	Lake and Cook
Date of Coverage	1965 April 28
Project Code	65004
Scale	1:200
Focal Length	Not Specified
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%

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### 1967 Photography

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Agency	AGRICULTURAL STABILIZATION & CONSERVATION SERVICE, U.S. DEPARTMENT OF AGRICULTURE
Latitude	420730N
Longitude	0874500W
Quadrangle	Highland Park
Date of Coverage	1967 Oct 20
Project Code	BWX
Scale	20,000
Focal Length	8.25in or 210mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	80%



# Appendix F (continued)

Agency	AGRICULTURAL STABILIZATION & CONSERVATION SERVICE, U.S. DEPARTMENT OF AGRICULTURE
Latitude	421500N
Longitude	0874500W
Quadrangle	Waukegan
Date of Coverage	1967 Oct 20
Project Code	BWX
Scale	1:20,000
Focal Length	8.25in or 210mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%
Remarks	04

Agency	AGRICULTURAL STABILIZATION & CONSERVATION SERVICE, U.S. DEPARTMENT OF AGRICULTURE
Latitude	422230N
Longitude	0874500W
Quadrangle	Zion
Date of Coverage	1967 Oct 20
Project Code	BWX
Scale	1:20,000
Focal Length	8.25in or 210mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%
Remarks	04



## Appendix F (continued)

Agency	CHICAGO AERIAL SURVEY (GEONEX as of 1990)
Latitude	415230N
Longitude	0873730W
Quadrangle	Chicago Loop
Date of Coverage	1967
Project Code	7011
Scale	1:9,600
Focal Length	6.00in or 152mm
Film Type	Black and White Infrared
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%

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### 1968 Photography

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Agency	U.S. AIR FORCE
Latitude	415230N
Longitude	0873730W
Quadrangle	Chicago Loop
Date of Coverage	1968 Sep 12
Project Code	6830A
Scale	1:16,572
Focal Length	1.97in or 50mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	50%
Remarks	2 0040455

Agency	U.S. AIR FORCE
Latitude	415230N
Longitude	0873730W
Quadrangle	Chicago Loop
Date of Coverage	1968 Sep 12
Project Code	6830A
Scale	1:16,334
Focal Length	1.97in or 50mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	20%
Remarks	2 0040472



# Appendix F (continued)

Agency	U.S. AIR FORCE
Latitude	415230N
Longitude	0873730W
Quadrangle	Chicago Loop
Date of Coverage	1968 Sep 12
Project Code	6830A
Scale	1:16,351
Focal Length	1.97in or 50mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	40%
Remarks	2 0040480

Agency	U.S. AIR FORCE
Latitude	420000N
Longitude	0873730W
Quadrangle	Evanston
Date of Coverage	1968 Sep 12
Project Code	6830A
Scale	1:16,334
Focal Length	1.97in or 50mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	20%
Remarks	2 0040472

Agency	U.S. AIR FORCE
Latitude	420000N
Longitude	0873730W
Quadrangle	Evanston
Date of Coverage	1968 Sep 12
Project Code	6830A
Scale	1:16,547
Focal Length	1.97in or 50mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	20%
Remarks	2 0040466





#### Appendix F (continued)

Agency	U.S. AIR FORCE
Latitude	420730N
Longitude	0873730W
Quadrangle	Highland Park
Date of Coverage	1968 Sep 12
Project Code	6830A
Scale	1:17,511
Focal Length	1.97in or 50mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	40%
Remarks	2 0040523

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#### 1969 Photography

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Agency	U.S. AIR FORCE
Latitude	421500N
Longitude	0874500W
Quadrangle	Waukegan
Date of Coverage	1969 Oct 30
Project Code	6830A
Scale	1:14,261
Focal Length	1.97in or 50mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	20%
Remarks	2 0090865

Agency	SIDWELL COMPANY
County	Lake and Cook
Date of Coverage	1969 April 29
Project Code	69020
Scale	1:200
Focal Length	Not Specified
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%



Appendix F (continued)

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1970 Photography

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Agency	NORTHEASTERN ILLINOIS PLANNING COMMISSION
FIPS State/County	IL, Lake
Date of Coverage	1970
Scale	1:4,800
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Reconnaissance
Cloud Cover	0%
Quadrangle Cover	100%

Agency	NORTHEASTERN ILLINOIS PLANNING COMMISSION
FIPS State/County	IL, Lake
Date of Coverage	1970
Scale	1:24,000
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Reconnaissance
Cloud Cover	0%
Quadrangle Cover	100%

Agency	NORTHEASTERN ILLINOIS PLANNING COMMISSION
FIPS State/County	IL, Lake
Date of Coverage	1970
Scale	1:4,800
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Reconnaissance
Cloud Cover	0%
Quadrangle Coverage	100%



## Appendix F (continued)

Agency	NORTHEASTERN ILLINOIS PLANNING COMMISSION
FIPS State/County	IL, Lake
Date of Coverage	1970
Scale	1:24,000
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Reconnaissance
Cloud Cover	0%
Quadrangle Coverage	100%

Agency	NORTHEASTERN ILLINOIS PLANNING COMMISSION
FIPS State/County	IL, Lake
Date of Coverage	1970
Scale	1:4,800
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Reconnaissance
Cloud Cover	0%
Quadrangle Coverage	80%

Agency	NORTHEASTERN ILLINOIS PLANNING COMMISSION
FIPS State/County	IL, Lake
Date of Coverage	1970
Scale	1:24,000
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Reconnaissance
Cloud Cover	0%
Quadrangle Coverage	80%



## Appendix F (continued)

Agency	CHICAGO AERIAL SURVEY (GEONEX as of 1990)
Latitude	415230N
Longitude	0873730W
Quadrangle	Chicago Loop
Date of Coverage	1970
Project Code	70100
Scale	1:24,000
Focal Length	6.00in or 152mm
Film Type	Black and White Infrared
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Cover	100%

Agency	CHICAGO AERIAL SURVEY (GEONEX as of 1990)
Latitude	420730N
Longitude	0874500W
Quadrangle	Highland Park
Date of Coverage	1970
Project Code	70100
Scale	1:24,000
Focal Length	6.00in or 152mm
Film Type	Black and White Infrared
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	80%

Agency	CHICAGO AERIAL SURVEY (GEONEX as of 1990)
Latitude	420730N
Longitude	0874500W
Quadrangle	Highland Park
Date of Coverage	1970
Project Code	70100
Scale	1:24,000
Focal Length	6.00in or 152mm
Film Type	Black and White Infrared
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	80%





## Appendix F (continued)

Agency	CHICAGO AERIAL SURVEY (GEONEX as of 1990)
Latitude	421500N
Longitude	0874500W
Quadrangle	Waukegan
Date of Coverage	1970
Project Code	70100
Scale	1:24,000
Focal Length	6.00in or 152mm
Film Type	Black and White Infrared
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%

Agency	CHICAGO AERIAL SURVEY (GEONEX as of 1990)
Latitude	421500N
Longitude	0874500W
Quadrangle	Waukegan
Date of Coverage	1970
Project Code	70100
Scale	1:24,000
Focal Length	6.00in or 152mm
Film Type	Black and White Infrared
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%

Agency	CHICAGO AERIAL SURVEY (GEONEX as of 1990)
Latitude	422230N
Longitude	0874500W
Quadrangle	Zion
Date of Coverage	1970
Project Code	70100
Scale	1:24,000
Focal Length	6.00in or 152mm
Film Type	Black and White Infrared
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%



## Appendix F (continued)

Agency	CHICAGO AERIAL SURVEY (GEONEX as of 1990)
Latitude	422230N
Longitude	0874500W
Quadrangle	Zion
Date of Coverage	1970
Project Code	70100
Scale	1:24,000
Focal Length	6.00in or 152mm
Film Type	Black and White Infrared
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%

Agency	ILLINOIS DEPARTMENT OF TRANSPORTATION
FIPS State/County	IL
Date of Coverage	1970 June
Project Code	R-1786
Scale	1:9,800
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%

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## 1971 Photography

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Agency	U.S. ARMY CORPS OF ENGINEERS, EDC
Latitude	415230N
Longitude	0873730W
Quadrangle	Chicago Loop
Date of Coverage	1971 May 03
Project Code	USCS
Scale	1:6,521
Focal Length	1.97in or 50mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	60%
Remarks	2 00100129



## Appendix F (continued)

Agency	U.S. ARMY CORPS OF ENGINEERS, EDC
Latitude	415230N
Longitude	0873730W
Quadrangle	Chicago Loop
Date of Coverage	1971 May 03
Project Code	USCS
Scale	1:6,540
Focal Length	1.97in or 50mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	30%
Remarks	2 00100124

Agency	U.S. ARMY CORPS OF ENGINEERS, EDC
Latitude	420000N
Longitude	0873730W
Quadrangle	Evanston
Date of Coverage	1971 May 03
Project Code	USCS
Scale	1:6,540
Focal Length	1.97in or 50mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	30%
Remarks	2 00100124

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## 1972 Photography

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Agency	AERO-METRIC ENGINEERING INC.
County	Lake and Cook
Date of Coverage	1972 April
Project Code	Not Specified
Scale	1:200
Focal Length	Not Specified
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%



Appendix F (continued)

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1973 Photography

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Agency	U.S. GEOLOGICAL SURVEY
Latitude	415230N
Longitude	0873730W
Quadrangle	Chicago Loop
Date of Coverage	1973 May 15
Project Code	VDBK
Scale	1:18,122
Focal Length	Other
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%
Remarks	0047 0534

Agency	SIDWELL COMPANY
Latitude	415230N
Longitude	0873730W
Quadrangle	Chicago Loop
Date of Coverage	1973 Mar
Project Code	None Specified
Scale	1:24,000
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%





Appendix F (continued)

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1974 Photography

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Agency	NORTHEASTERN ILLINOIS PLANNING COMMISSION
FIPS State/County	IL, Lake
Date of Coverage	1974
Scale	1:15,840
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Reconnaissance
Cloud Cover	0%
Quadrangle Coverage	100%
Remarks	LAKE CO. IL

Agency	NORTHEASTERN ILLINOIS PLANNING COMMISSION
FIPS State/County	IL, Lake
Date of Coverage	1974
Scale	1:15,840
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Reconnaissance
Cloud Cover	0%
Quadrangle Coverage	80%
Remarks:	LAKE CO. 73-4

Agency	NORTHEASTERN ILLINOIS PLANNING COMMISSION
FIPS State/County	IL, Lake
Date of Coverage	1974
Scale	1:15,840
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Reconnaissance
Cloud Cover	0%
Quadrangle Cover	100%
Remarks	LAKE CO. 73-4



## Appendix F (continued)

Agency	ILLINOIS DEPARTMENT OF TRANSPORTATION
FIPS State/County	IL
Date of Coverage	1974 June
Project Code	R-2244
Scale	1:9,600
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Reconnaissance
Cloud Cover	0%
Quadrangle Coverage	100%

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### 1975 Photography

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Agency	CHICAGO AERIAL SURVEY (GEONEX as of 1990)
Latitude	415230N
Longitude	0873730W
Quadrangle	Chicago Loop
Date of Coverage	1975
Project Code	75100
Scale	1:24,000
Focal Length	6.00in or 152mm
Film Type	Black and White Infrared
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%

Agency	CHICAGO AERIAL SURVEY (GEONEX as of 1990)
Latitude	420730N
Longitude	0874500W
Quadrangle	Highland Park
Date of Coverage	1975
Project Code	75100
Scale	1:24,000
Focal Length	6.00in or 152mm
Film Type	Black and White Infrared
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	80%



## Appendix F (continued)

Agency	CHICAGO AERIAL SURVEY (GEONEX as of 1990)
Latitude	421500N
Longitude	0874500W
Quadrangle	Waukegan
Date of Coverage	1975
Project Code	75100
Scale	1:24,000
Focal Length	6.00in or 152mm
Film Type	Black and White Infrared
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%

Agency	CHICAGO AERIAL SURVEY (GEONEX as of 1990)
Latitude	422230N
Longitude	0874500W
Quadrangle	Zion
Date of Coverage	1975
Project Code	75100
Scale	1:24,000
Focal Length	6.00in or 152mm
Film Type	Black and White Infrared
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%

Agency	NORTHEASTERN ILLINOIS PLANNING COMMISSION
FIPS State/County	IL, Lake
Date of Coverage	1975
Scale	1:4,800
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Reconnaissance
Cloud Cover	0%
Quadrangle Coverage	100%
Remarks	LAKE CO. IL



#### Appendix F (continued)

Agency	NORTHEASTERN ILLINOIS PLANNING COMMISSION
FIPS State/County	IL, Lake
Date of Coverage	1975
Scale	1:4,800
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Reconnaissance
Cloud Cover	0%
Quadrangle Coverage	80%
Remarks	LAKE CO. IL

Agency	NORTHEASTERN ILLINOIS PLANNING COMMISSION
FIPS State/County	IL, Lake
Date of Coverage	1975
Scale	1:4,800
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Reconnaissance
Cloud Cover	0%
Quadrangle Cover	100%
Remarks	LAKE CO. IL

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#### 1976 Photography

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Agency	SIDWELL COMPANY
Latitude	415230N
Longitude	0873730W
Quadrangle	Chicago Loop
Date of Coverage	1976 Mar
Project Code	00
Scale	1:24,000
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%
Remarks	113-JK 4377-4394





## Appendix F (continued)

Agency	ILLINOIS DEPARTMENT OF TRANSPORTATION
FIPS State/County	IL
Date of Coverage	1976 May
Project Code	R-2244
Scale	1:9,600
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%

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### 1977 Photography

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Agency	ILLINOIS DEPARTMENT OF TRANSPORTATION
FIPS State/County	IL
Date of Coverage	1977 May
Project Code	R-2244
Scale	1:9,600
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%

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### 1978 Photography

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Agency	ILLINOIS DEPARTMENT OF TRANSPORTATION
FIPS State/County	IL
Date of Coverage	1978 April
Project Code	R-2244
Scale	1:9,400
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%



Appendix F (continued)

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1979 Photography

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Agency	ILLINOIS DEPARTMENT OF TRANSPORTATION
FIPS State/County	IL
Date of Coverage	1979 June
Project Code	R-2244
Scale	1:9,800
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%

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1980 Photography

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Agency	NORTHEASTERN ILLINOIS PLANNING COMMISSION
FIPS State/County	IL, Lake
Date of Coverage	1980
Scale	1:24,000
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Reconnaissance
Quadrangle Cover	100%
Remarks	LAKE CO. IL

Agency	NORTHEASTERN ILLINOIS PLANNING COMMISSION
FIPS State/County	IL, Lake
Date of Coverage	1980
Scale	1:24,000
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Reconnaissance
Quadrangle Coverage	100%
Remarks	LAKE CO. IL



## Appendix F (continued)

Agency	NORTHEASTERN ILLINOIS PLANNING COMMISSION
FIPS State/County	IL, Lake
Date of Coverage	1980
Scale	1:24,000
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Reconnaissance
Quadrangle Coverage	80%
Remarks	LAKE CO. IL

Agency	NORTHEASTERN ILLINOIS PLANNING COMMISSION
Latitude	415230N
Longitude	0873730W
Quadrangle	Chicago Loop
Date of Coverage	1980
Project Code	00
Scale	1:24,000
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Reconnaissance
Cloud Cover	0%
Quadrangle Coverage	100%

Agency	SIDWELL COMPANY
Latitude	415230N
Longitude	0873730W
Quadrangle	Chicago Loop
Date of Coverage	1980 Mar
Project Code	00
Scale	1:24,000
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%



## Appendix F (continued)

Agency	SIDWELL COMPANY
Latitude	420730N
Longitude	0874500W
Quadrangle	Highland Park
Date of Coverage	1980 Mar
Project Code	00
Scale	1:24,000
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	80%

Agency	SIDWELL COMPANY
Latitude	421500N
Longitude	0874500W
Quadrangle	Waukegan
Date of Coverage	1980 Mar
Project Code	00
Scale	1:24,000
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%

Agency	SIDWELL COMPANY
Latitude	422230N
Longitude	0874500W
Quadrangle	Zion
Date of Coverage	1980 Mar
Project Code	00
Scale	1:24,000
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%





## Appendix F (continued)

Agency	ILLINOIS DEPARTMENT OF TRANSPORTATION
FIPS State/County	IL
Date of Coverage	1980 May
Project Code	R-2244
Scale	1:9,400
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%

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### 1981 Photography

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Agency	CHICAGO AERIAL SURVEY (GEONEX as of 1990)
Latitude	420730N
Longitude	0874500W
Quadrangle	Highland Park
Date of Coverage	1981 Mar
Project Code	81200
Scale	1:24,000
Focal Length	6.00in or 152mm
Film Type	Black and White Infrared
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	80%

Agency	CHICAGO AERIAL SURVEY (GEONEX as of 1990)
Latitude	421500N
Longitude	0874500W
Quadrangle	Waukegan
Date of Coverage	1981 Mar
Project Code	81200
Scale	1:24,000
Focal Length	6.00in or 152mm
Film Type	Black and White Infrared
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%



## Appendix F (continued)

Agency	CHICAGO AERIAL SURVEY (GEONEX as of 1990)
Latitude	422230N
Longitude	0874500W
Quadrangle	Zion
Date of Coverage	1981 Mar
Project Code	81200
Scale	1:24,000
Focal Length	6.00in or 152mm
Film Type	Black and White Infrared
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%

Agency	CHICAGO AERIAL SURVEY (GEONEX as of 1990)
Latitude	415230N
Longitude	0873730W
Quadrangle	Chicago Loop
Date of Coverage	1981 00
Project Code	81200
Scale	1:24,000
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%

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## 1982 Photography

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Agency	ILLINOIS DEPARTMENT OF TRANSPORTATION
FIPS State/County	IL
Date of Coverage	1982 June
Project Code	R-2244
Scale	1:9,800
Focal Length	6.00in or 152mm
Film Type	Color
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%



## Appendix F (continued)

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### 1983 Photography

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Agency	ILLINOIS DEPARTMENT OF TRANSPORTATION
FIPS State/County	IL
Date of Coverage	1983 June
Project Code	R-3510
Scale	1:9,900
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%

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### 1985 Photography

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Agency	CHICAGO AERIAL SURVEY (GEONEX as of 1990)
Latitude	415230N
Longitude	0873730W
Quadrangle	Chicago Loop
Date of Coverage	1985
Project Code	85100
Scale	1:24,000
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%



## Appendix F (continued)

Agency	CHICAGO AERIAL SURVEY (GEONEX as of 1990)
Latitude	420730N
Longitude	0874500W
Quadrangle	Highland Park
Date of Coverage	1985
Project Code	85100
Scale	1:24,000
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	80%

Agency	CHICAGO AERIAL SURVEY (GEONEX as of 1990)
Latitude	421500N
Longitude	0874500W
Quadrangle	Waukegan
Date of Coverage	1985
Project Code	85100
Scale	1:24,000
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%

Agency	CHICAGO AERIAL SURVEY (GEONEX as of 1990)
Latitude	422230N
Longitude	0874500W
Quadrangle	Zion
Date of Coverage	1985
Project Code	85100
Scale	1:24,000
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%





## Appendix F (continued)

Agency	NORTHEASTERN ILLINOIS PLANNING COMMISSION
Latitude	415230N
Longitude	0873730W
Quadrangle	Chicago Loop
Date of Coverage	1985
Project Code	None Specified
Scale	1:4,800
Focal Length	None Specified
Film Type	Black and White
Sensor Class	Vertical Reconnaissance
Cloud Cover	None Specified
Quadrangle Coverage	100%

Agency	NORTHEASTERN ILLINOIS PLANNING COMMISSION
Latitude	415230N
Longitude	0873730W
Quadrangle	Highland Park
Date of Coverage	1985
Project Code	None Specified
Scale	1:24,000
Focal Length	None Specified
Film Type	Black and White
Sensor Class	Vertical Reconnaissance
Cloud Cover	None Specified
Quadrangle Coverage	100%

Agency	NORTHEASTERN ILLINOIS PLANNING COMMISSION
Latitude	420730N
Longitude	0874500W
Quadrangle	Highland Park
Date of Coverage	1985
Project Code	None Specified
Scale	1:4,800
Focal Length	None Specified
Film Type	Black and White
Sensor Class	Vertical Reconnaissance
Cloud Cover	None Specified
Quadrangle Coverage	80%



## Appendix F (continued)

Agency	NORTHEASTERN ILLINOIS PLANNING COMMISSION
Latitude	420730N
Longitude	0874500W
Quadrangle	Waukegan
Date of Coverage	1985
Project Code	None Specified
Scale	1:24,000
Focal Length	None Specified
Film Type	Black and White
Sensor Class	Vertical Reconnaissance
Cloud Cover	None Specified
Quadrangle Coverage	80%

Agency	NORTHEASTERN ILLINOIS PLANNING COMMISSION
Latitude	421500N
Longitude	0874500W
Quadrangle	Waukegan
Date of Coverage	1985
Project Code	None Specified
Scale	1:24,000
Focal Length	None Specified
Film Type	Black and White
Sensor Class	Vertical Reconnaissance
Cloud Cover	None Specified
Quadrangle Coverage	100%

Agency	NORTHEASTERN ILLINOIS PLANNING COMMISSION
Latitude	421500N
Longitude	0874500W
Quadrangle	Waukegan
Date of Coverage	1985
Project Code	None Specified
Scale	1:4,800
Focal Length	None Specified
Film Type	Black and White
Sensor Class	Vertical Reconnaissance
Cloud Cover	None Specified
Quadrangle Coverage	100%



## Appendix F (continued)

Agency	NORTHEASTERN ILLINOIS PLANNING COMMISSION
Latitude	422230N
Longitude	0874500W
Quadrangle	Zion
Date of Coverage	1985
Project Code	None Specified
Scale	1:24,000
Focal Length	None Specified
Film Type	Black and White
Sensor Class	Vertical Reconnaissance
Cloud Cover	None Specified
Quadrangle Coverage	100%

Agency	NORTHEASTERN ILLINOIS PLANNING COMMISSION
Latitude	422230N
Longitude	0874500W
Quadrangle	Zion
Date of Coverage	1985
Project Code	None Specified
Scale	1:4,800
Focal Length	None Specified
Film Type	Black and White
Sensor Class	Vertical Reconnaissance
Cloud Cover	None Specified
Quadrangle Coverage	100%

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## 1986 Photography

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Agency	ILLINOIS DEPARTMENT OF TRANSPORTATION
FIPS State/County	IL
Date of Coverage	1986 April
Project Code	R-3510
Scale	1:13,600
Focal Length	6.00in or 152mm
Film Type	Black and White
Cloud Cover	0%
Quadrangle Coverage	100%



## Appendix F (continued)

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### 1987 Photography

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Agency	SIDWELL COMPANY
Latitude	415230N
Longitude	0873730W
FIPS State/County	IL, Cook
Date of Coverage	1987 Apr
Project Code	None Specified
Scale	1:24,000
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%

Agency	SIDWELL COMPANY
Latitude	420730N
Longitude	0874500W
Quadrangle	Highland Park
Date of Coverage	1987 Apr
Project Code	None Specified
Scale	1:24,000
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	80%

Agency	SIDWELL COMPANY
Latitude	421500N
Longitude	0874500W
Quadrangle	Waukegan
Date of Coverage	1987 Apr
Project Code	None Specified
Scale	1:24,000
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%





## Appendix F (continued)

Agency	SIDWELL COMPANY
Latitude	422230N
Longitude	0874500W
Quadrangle	Zion
Date of Coverage	1987 Apr
Project Code	None Specified
Scale	1:24,000
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%

Agency	ILLINOIS DEPARTMENT OF TRANSPORTATION
FIPS State/County	IL
Date of Coverage	1987 March
Project Code	R-3510
Scale	1:13,400
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%

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## 1988 Photography

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Agency	ILLINOIS DEPARTMENT OF TRANSPORTATION
Quadrangle	IL
Date of Coverage	1988
Project Code	R-3510
Scale	1:13,000
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%



## Appendix F (continued)

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### 1990 Photography

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Agency	NORTHEASTERN ILLINOIS PLANNING COMMISSION
FIPS State/County	IL, Lake
Date of Coverage	1990
Scale	1:24,000
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Reconnaissance
Cloud Cover	0%
Quadrangle Coverage	100%

Agency	NORTHEASTERN ILLINOIS PLANNING COMMISSION
FIPS State/County	IL, Lake
Date of Coverage	1990
Scale	1:4,800
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Reconnaissance
Cloud Cover	0%
Quadrangle Coverage	100%

Agency	NORTHEASTERN ILLINOIS PLANNING COMMISSION
FIPS State/County	IL, Lake
Date of Coverage	1990
Scale	1:4,800
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Reconnaissance
Cloud Cover	0%
Quadrangle Coverage	80%



## Appendix F (continued)

Agency	NORTHEASTERN ILLINOIS PLANNING COMMISSION
FIPS State/County	IL, Lake
Date of Coverage	1990
Scale	1:24,000
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Reconnaissance
Cloud Cover	0%
Quadrangle Coverage	80%

Agency	NORTHEASTERN ILLINOIS PLANNING COMMISSION
FIPS State/County	IL, Lake
Date of Coverage	1990
Scale	1:4,800
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Reconnaissance
Cloud Cover	0%
Quadrangle Coverage	100%

Agency	NORTHEASTERN ILLINOIS PLANNING COMMISSION
FIPS State/County	IL, Lake
Date of Coverage	1990
Scale	1:24,000
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Reconnaissance
Cloud Cover	0%
Quadrangle Coverage	100%



## Appendix F (continued)

Agency	CHICAGO AERIAL SURVEY (GEONEX as of 1990)
Latitude	415230N
Longitude	0873730W
FIPS State/County	IL, Cook
Date of Coverage	1990
Project Code	90100
Scale	1:24,000
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%

Agency	CHICAGO AERIAL SURVEY (GEONEX as of 1990)
Latitude	420730N
Longitude	0874500W
Quadrangle	Highland Park
Date of Coverage	1990
Project Code	90100
Scale	1:24,000
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	80%

Agency	CHICAGO AERIAL SURVEY (GEONEX as of 1990)
Latitude	421500N
Longitude	0874500W
Quadrangle	Waukegan
Date of Coverage	1990
Project Code	90100
Scale	1:24,000
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%





## Appendix F (continued)

Agency	CHICAGO AERIAL SURVEY (GEONEX as of 1990)
Latitude	422230N
Longitude	0874500W
Quadrangle	Zion
Date of Coverage	1990
Project Code	90100
Scale	1:24,000
Focal Length	6.00in or 152mm
Film Type	Black and White
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%

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### 1991 Photography

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Agency	ILLINOIS DEPARTMENT OF TRANSPORTATION
FIPS State/County	IL
Date of Coverage	1991
Project Code	R3510
Scale	1:10,572
Focal Length	6.00in or 152mm
Film Type	Color
Sensor Class	Vertical Carto (Implies Stereo)
Cloud Cover	0%
Quadrangle Coverage	100%





